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ANNEX A - DANA REPORT

REVIEW REPORT ON THE MISSOURI RIVER AND TRIBUTARIES



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WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY

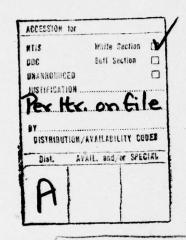
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REVIEW REPORT FOR



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REVIEW REPORT FOR METROPOLITAN OMAHA, NEBRASKA COUNCIL BLUFFS, IOWA WATER AND RELATED LAND RESOURCES MANAGEMENT STUDY

Volume V Supporting Technical Reports Appendix

ANNEX A	DANA REPORT
ANNEX B	INTASA LAND USE PAPER
ANNEX C	URBAN STORMWATER HYDROLOGY STUDY
ANNEX D	URBAN STREET POLLUTANT ANALYSIS
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ANNEX L	INTASA RECREATION PAPER
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PREPARED BY THE
OMAHA DISTRICT CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY

SOCIO-ECONOMIC IMPACT

ON

CHANGING LIFESTYLES

TO

THE YEAR 2020

Contracted to: Dana College, Blair, Nebraska

Authors:

R. Gary Dean, PhD Joel C. Snell, MA

SOCIO-ECONOMIC IMPACT ON CHANGING LIFESTYLES TO THE YEAR 2020

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PREFACE

The focus of our study deals with the socio-economic impact on the life styles to the year 2020. The importance of life styles is viewed in terms of how living patterns retard or encourage urban spread. Simultaneously and interactively, the authors have viewed political trends and Plains States regional forecasts as well as the emergence of new living patterns in the seven-county area encompassing and surrounding the core of our study, Omaha and Council Bluffs.

Chapter One deals with a discussion of the field of futurism and some assumptions made by the researchers.

Chapter Two deals with urban systems encompassing the sociological, economic, political, and human biological aspects of urban growth.

Chapter Three deals with specific, but highly visible considerations of housing and transportation.

Chapter Four incorporates all variables which in a casual way create new as well as existing patterns in the urban form.

Chapter Five summarizes the major discoveries of the study.

The findings include the following. The authors used three alternative futures. One future, "Super Industrialism", predicts a future based on projections of current trends. Basically, this scenario envisions a highly technological society and a population which is moderately increased and widely distributed about the city.

The "Post Industrial Society" is one in which there is a large consumption of energy, dominance of the individual auto, and the preponderance of individual family housing patterns. The majority of new growth in the city is at its fringes.

A second future "The Green Revolution" envisions a system dramatically different than current trends. It is based upon a post-keynesian government in which urban growth is controlled and central cities are revitalized with modern mags transit systems, new multi-dwelling housing and green belts. It also assumes a reduction of tensions among social classes and ethnic groups. Population increases would be reduced to zero level growth or less. Domestic expenditures at the federal level would take priority over defense and armament expenditures. Often characteristics include the preservation of small farm communities, introduction of new towns, and the promotion of satellite cities.

A third alternative was entitled, "Restoration City", under this concept, a combination of promotion of the market system and the enhancement of national and local public security systems prevail as there are major fluctuations in the market. Due to severe economic downturns, households double up as grandparents, parents, and children live under the same roof. Some type of mass transit system is necessary as increasingly large portions of the population are not able to obtain credit for suburban housing and auto purchases. Traditional social, religious, and political values are implemented; large populations may occur. These added numbers may be used in expansion—oriented national policies as federal officials select to destabilize neighboring and foreign territories to encourage out—migration to these newly annexed areas and reduce population pressure.

In terms of city growth, suburbs would flourish but outward pressure would be reduced by population impaction of numerous middle and lower income residents.

The authors do not make or assert preference about the future alternates. Rather, they suggest that the "super industrial state" is the most probable.

If the reader should question the combination of elements in each alternative future, a table has been provided in which each social and economic element is isolated. It is suggested that each variable either advances or retards population dispersion. At this time the ultimate added or retardent impact of each variable on population dispersion in combination with other variables is not known.

Though the field of social and economic futurism is indeed immature and sometimes wrong, we feel there is striking potential in this area. Years ago, the Hoover Commission* successfully predicted certain aspects of later life styles in the United States. As Ogburn has noted, social institutions are relatively slower to change than technical and physical structures. This gives us some stability in terms of our future projection. We have made our projections broad enough to indicate limits, but not so wide to be devoid of content and meaning. There is a fundamental common sense as well as logic in forecasting. As Bertrand De Jouvenal notes, "We have to make wagers about the future; we have no choice in the matter."

^{*} Not the Hoover Commission on Governmental Reform of the late 40's but the "Committee on Social Trends" of the 30's instituted by then President Hoover.

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The authors wish to acknowledge with special appreciation the contribution of the following persons, whose willingness to openly share their thoughts and feelings with us has added a significant dimension to this paper.

Some made their contribution by response to a questionnaire and others wrote detailed comments about a particular area. Our special thanks to all of them.

Special note. Although most Senators, Representatives, and Mayors responded, not all did. We felt obligated, however, to list all those who were sent letters to protect the anonymity of those who did respond.

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CHAPTER ONE

INTRODUCTION

Daniel Bell, an American futurist, notes that "the year 2000 has already arrived, for in the decisions we make now, in the way we design our environment and thus sketch our lines of constraint, the future is committed."

Bell not only underscores the importance of forecasting for the future but also the potency of futurism as it has been used in the past. Though social and technological forecasting are filled with modern jargon about "Trend Extrapolation", "Cross-Impacts", and "model building", the field is an ancient art.

Through existing social institutions, the old can structure the new, although each generation makes commitments consciously or unconsciously that give rise to new behaviors and new physical structures.

Throughout history, prediction has come from all sectors of society, from visionaries to entrenched establishmentarians. Early data on preliterate systems indicates that magic, science, and religion all competed in differing ways to project the future. ⁵ All have had to grapple with, at its core, the prediction of tommorrow.

On short range projects, prophets - especially those who have committed their forecast to print - have had to enjoy or suffer the consequences of their predictions. Gerald Clarks has noted that the field of prophecy has generally not been fruitful. Most predictions have been proven wrong and the occupation of forecasting has been a risky one. The field is full of faulty forecasts. The Library of Congress has gathered a large collection of poor judgments in technological, economic, and social forecasting and others have come to similar conclusions.

In terms of the social sciences, one of the first fore-casters was an essayist and philosopher, Thomas Malthus. Malthus' prediction was of misery for the lower classes in England, based on his projections of geometrical population increase on one side and arithmetic increase of agricultural commodities on the other. Although there are neo-Malthusians who still accept his basic equation, the industrial revolution shows that on balance Malthus was wrong. Skreja notes that in the 1930's the Sensus Bureau spoke with confidence that the U. 3. would have a population of 160 million by the year 1970. To overcome its earlier error, the Bureau now projects range of forecasts.

Not all have been wrong, however. Herman Cohn was a futurist who died more than 50 years ago. His last manuscript dealt with the social and political consequences of the internal combustion engine. He noted that it was good to get waste materials of animals off the streets but that the automobile would present problems just as difficult. He noted that they would become status symbols and would replace labor on the farm. This, he indicated, would create large urban ghettos of displaced rural migrants, giving rise to even more difficulties in the metropolitan regions. Pollution and demise of public transportation for road

systems were also projected. 11 Jules Verne was correct in his prediction of space flights. 12 In the 1920's, Buckminster Fuller predicted the present environmental problem as well as the great technological leap which occurred after World War II. 13 Much of the Toqueville's anticipation of America's future, based on his observations in the 1840's, "appears sound". 14

In the last quarter century the study of the social, technical, and economic impact of the future has become significantly important.

Shonfield has noted the emergence of the field of "futurology" and, though optimistic, he does raise some questions about its limits. ¹⁵ Futurism appears to be a growing interest among academic, professional, and industrial researchers, and has received sponsorship from the Federal government, national and multi-national corporations. ¹⁶ Academic courses dealing with the future are increasingly being offered. ¹⁷ McHale's study of the field of futurism indicates nearly 3,000 people involved in the area, most of them in freelance, corporate, or government work. ¹⁸

Recently, forecasting in business, economics, the social sciences, and other areas has emerged. Scholars, with the help of the computer, have tended to veer away from concrete and specific predictions in favor of alternative models, parametric speculation, and projections.

Due to the topic, both the theoretical assumptions and methodological approaches are diverse and varied. Some propose viewing the future in Hegelean framework, ¹⁹ and others suggest lateral "zig zag" approaches (also called morphological analysis). ²⁰

Still others have suggested the following: (1) analogous model systems (also called railway systems); 21 basing new models on old ones which have old ones which have already examined the same phenomena; (2) cycles, which look for non-chance regularities over various time spans; 22 (3) "Delphi" techniques, based on experts normative forecasts; 23 (4) "trend line" projections which base future outcomes on the continuance of present conditions or zero order change; 21, (5) "envelope" forecasting which emphasizes technological change as causing social change; 25 (6) "scenario" writing, which loosely describes various models and the total social network of relations (highly ideographic and may draw upon science fiction); 26 (7) socio-cultural analysis, which looks in a qualitive way at social and economic structure (not only at specific institutions, but also at the interdependence of those institutions which make up the greater whole, based on organic assumptions); 27 (8) "others", applying conveniently to a myriad of smaller subset approaches summarized by de Jouvenal. 28

These varying approaches, including both their own theoretical assumptions and the methods to initiate them, may best be thought of as overlapping rather than mutually exclusive. Ideologically, however, controversy appears to be brewing as to the general nature of the future. The controversy deals with alternative images of the future, optimistic "utopias" on the one side and pessimistic "doomsdays" on the other. 29

In this study, the authors drew heavily upon social and cultural forecasting, but basically our approach was eclectic. Not only did the researchers look at social and economic structures from secondary sources, but this study also considered expert

testimony. As a derivative from the Delphi technique, interviews of expert normative forecasts were included in the report. At the same time, a sincere effort was made to conduct what Merton calls the semi-structured interview. ³⁰ After certain topics were discussed, the respondent's early remarks were combined with later ones. Due to time limits, however, not all primary source interviews were conducted in this manner.

Another description of our approach might be what Theobold called "systemic". This approach combines, when possible, both qualitative and quantitative approaches and includes an organic or systems approach, drawing upon these assumptions.

(1) Notwithstanding the claims of social scientists in the 1950's, observers concerned with social and economic arrangements are not value-free. These researchers accepted certain academic blinders and probably overlooked others. We believe that extremes in perception were avoided, however, some forecasters have been plagued with optimistic progress theories, which by design create generally bright futures in order to encourage the population to sustain present social and economic arrangements. Others use a doomsday approach for active promotion or resistance to social change. Years ago, philosopher Georges Sorel described the use and importance of the social myth in terms of promoting or resisting changes in the future. The writers of this report have attempted to avoid struggling with or glorifying the future. This study speaks in relatively dispassionate description. Objectivity and value neutrality are desirable characteristics in themselves. We do not necessarily personally identify with the future outcome, nor share each others values.

- (2) We shall look for nomothetic as opposed to ideographic aspects of life. We assume that recurring events exert more influence than do unique ones. We contend that general institutional causes affect behavior more so than unique and exotic events, though one is more important than the other poly by degree. Perhaps the ecology movement was triggered by the Santa Barbara oil spill; Civil Rights legislation by the death of President Kennedy; the rise of Keynesianism by specific actions of President Roosevelt. We feel, however, that such colorless concepts as industrialization, urbanization, and the like, may be more responsible for these events. We do not deny the importance of specific conspiracies and dramatic tragedies, but we look more towards major institutional directions as being key factors.
- (3) The authors also perceive institutions as interdependent. A change in one subcomponent will affect all others to some degree.
- (4) The researchers assume a superorganism, that the whole be greater than the sum of the parts, that man has potentialities to be a group creature and will behave, in many though not all instances, in certain predictable patterns. We also assume that institutions take on characteristics over and above the sum of the characteristics of the individuals included.

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CHAPTER TWO

URBAN SYSTEMS

INTRODUCTION

This area considers interrelated sociological, economic, political, and human biological impacts on urban growth and structure. Sociological impacts include those of social organization, culture, super-industrialism, religion, leisure, communications, family systems, science and technology, rural-urban and minority relations. Economic impacts bear on industrial growth, employment forecasts, commercial and retail projections, consumerism, and the distribution of income. Political impacts include local government services to urban regions, national and local politics, relationships of city and county institutions, as well as services of the Federal government. Proxemics or human biology include in its domain population - fertility, mortality, and migration - ecology and energy as they deal with human numbers and environmental resources for urban living. The last two concern technology and projections of usable energy, and environmental issues of air and water pollution, solid wastes, and noise levels.

All these areas will be viewed in terms of their relationships to population dispersion. In each instance, the question that is ultimately asked is how each variable will encourage or retard the spread of human settlement.

SOCIAL ECOLOGY

SUPER-INDUSTRIALISM - TREND-LINE ASSUMPTIONS*

Early History

The beginning of social organization can be traced back to highly mobile, sparsely populated human groups which survived by hunting and gathering. Early city life came after the domestication of animals and the movement towards an agrarian economy. As Toffler notes, the majority of the people in the world today still live in agrarian settings. About 25 percent of the world's population, however, resides in an industrial milieu, and a small 1 to 3 percent now live in a super-industrial world.

Though the history of the city can be traced back to 3500 B.C., urban life as an American national pnenomenon did not emerge until the end of the 1920's.

Characteristics of Super-Industrialism

Americans now residing in and around the megapolitan centers of the west and mid-Atlantic are said to inhabit tomorrow's world. When of their life is based on mobility, transience, and rapid change. As suggested by Bell, Boulding and Toffler, industrial or super-industrialism is a highly mobile world triggered by rapid travel, instant communication, and supported by a service sector economy. The bases for their projections are generally evolutionary in character, based on trend line assumptions.

^{*} Trend here is used loosely; it connotes general evolutionary drift.

Given these premises, what will both the country and this locale look like some 50 years from now? Toffler sees mobility as a big factor which will continue to diminish culture differences among various regions in the country. If this futurist is correct, the Plains region may have characteristics similar to the highly populated coastal areas. Rapid movement of people is but one aspect of this widespread view of the future; however, other changes include (1) higher productivity and improved efficiency of the industrial system, (2) less standardization and conformity with the rise of specialty subcultures, (3) continuance of a Keynesian market system, (4) material abundance for the western world and America in particular, (5) rapid turnover in media personalities, art forms, and language usage.

In his <u>The Next 500 Years</u>, Beckwith envisions an industrial world with increased specialization, professionalism, large-scale production, automation, and monopoly control. He also indicates that education will continue to remain important along with scientific research. Population will increase along with "real" income. ¹² Herman Kahn sees an increasingly sensate, bourgeois, centralized world which is more westernized as well as urbanized. Esfandiary projects a world of increasing individual rights with world wide universalism. ¹⁴ A General Electric study indicates there will be increases in leisure, decentralization, rationality and social justice. ¹⁵

As the future world appears to be increasingly urbanized - by the year 2020, around 80 to 90 percent of the population will live in urban areas - the farm appears destined to play a new role. The future farm will probably be large family corporations working

huge biological monocultures. Land value will increase as farmers produce more and more food. There will be few small-scale farmers. The farm population will dwindle from 3.5 million today to 1 million farmers or less. Strategic financial accounting, planning, and large airlifted machines will be used. Production will be greatly increased.

Post-Industrialism and Technology

Even more rapid changes are expected in other technological fields. Noore projects elaborate communication centers within the home. Asimov envisions more personal air travel for the individual citizen. Toffler sees ocean farming, weather modification, genetic control, new forms of reproduction, and elementary robots. Kahn and Teinberg see the following kinds of technological changes very likely to occur by 2000:

Human hibernation for relatively extensive periods (months to years).

Improved capability to "change" the sex of children and adults.

Physically non-harmful methods of overindulging.

Chemical methods for improving memory and learning.

Simple techniques for extensive and "permanent" cosmetological changes (features, "figures", perhaps complexion and skin color, and even physique).

An even more comprehensive list of technical changes was indicated by a Delphi forecast on developments in space. Besides lunar colonies and deep space explorations, these more terrestial scientific breakthroughs were foreseen:

1970-1980:

Economically useful desalination of sea water.

Effective fertility control by oral contraceptive or other simple and inexpensive means.

Development of new synthetic materials for ultra-light construction.

Automated language translators.

New organs through transplanting or prosthesis.

Reliable weather forecasts.

Operation of a central data storage facility with wide access for general or specialized information retrieval.

1980-1990:

Reformation of physical theory, eliminating confusion in quantum-relativity and simplifying particle theory.

Implanted artificial organs made of plastic and electronic components.

Widespread and socially-accepted use of non-narcotic drugs (other than alcohol) for the purpose of producing specific changes in personality characteristics.

Stimulated emission (lasers) in X and Gamma-ray region of the spectrum.

Controlled thermonuclear power.

Creation of a primitive form of articifial life (at least in the form of self-replicating molecules).

1980-1990: (Cont'd)

Economically useful exploitation of the ocean bottom through mining (other than off-shore oil drilling).

1990-2000:

Feasibility of limited weather control, in the sense of substantially affecting regional weather at acceptable cost.

Economic feasibility of commercial generation of synthetic protein for food.

Increase by an order of magnitude in the relative number of psychotic cases amenable to physical or chemical therapy.

Biochemical general immunization against bacterial and viral diseases.

2000-2010:

Feasibility (not necessarily acceptance) of chemical control over some hereditary defects by alteration of genes through molecular engineering.

Economically useful exploitation of the ocean through farming, with the effect of producing at least 20 percent of the world's food.

Biochemicals to stimulate growth of new organs and limbs.

2010-2020:

Feasibility of using drugs to raise the level of intelligence (other than as dietary supplements and not in the sense of just temporarily raising the level of apperception. 2010-2020: (Cont'd)

Man-machine symbiosis, enabling may to extend his intelligence by direct electromechanical interaction between his brain and a computing machine.

Chemical control of the aging process, permitting extension of life span by 50 years.

Primary Institutions of the Future

Prognostications about the most basic human group, the family, indicate that it too will change somewhat. Though social institutions do not change as rapidly/technological innovations, there will be some variance occurring in family structure. The neolocal family will change slowly but will continue to predominate. Women's status will improve with gradual sex roles changes, improved job opportunities, and day care centers. The number of children per family will decline, sex of the child may be chosen, and there may be new forms of adoption. Young children may choose wider variations in sex roles with the basis of the role becoming unisexualism. Among a significant minority of the population, new non-conjugal "stem" families and communal systems may emerge. Importantly, mate choice may be more determined by personal affinities between individuals than by sexual excitement or romantic love.

Secondary Institutions of the Future

It is felt that voluntary associations will change in the future toward more "affinity" groups. 34 One institution of particular importance is organized religion. 35 There are many predictions which emphasize that

religion will continue to be expressed in conventional ways and that there will be a considerable proportion of the population retaining traditional beliefts. Some changes appear to be emerging, however. First, the modernist churches (e.g., Presbyterian, Methodist) appear to be stabilizing their membership increase and financial support while fundamentalist groups appear to be gaining. Second, churches on the political left and humanist churches appear to be growing, even though their organizational strength is not as pronounced. Some see a closer alliance between the social sciences and the church to allay increasing stresses in the ministerial role. In general, the future of religious systems appear to be polarizing between conservative and liberal churches. There is also a new emphasis on small congregational-oriented churches which can reinforce primary ties.

Formal associations still appear to be growing, with large corporations the dominant form. 40 The static, conformity-oriented bureaucracy as defined by Whyte 41 is likely to give way to the new "ad-hocracy" as described by Toffler and Bennis. 42 As Bennis notes:

Replacing bureaucracy will be adaptive, problem solving, temporary systems of diverse specialists linked together by coordinating and task-evaluating specialists in an organic flux. Such a flexible structure may enhance the satisfications intrinsic to the task, but will reduce commitment to work groups. Job mobility will increase. 43

Increasingly, employees will seek non-monetary rewards as work motivations and will have differing attitudes than in the

past. 44 Managers will be able to improve their efficiency through improved communication systems. 45 Forecasting, along with research and development, will play an even more prominent role. 46

Interactions and Life Styles

It appears that the traditional stratification system will persist in the United States. 47 Though there will be social inequality, one source notes decreases in the number of poor. 48 Others see the reduction of poverty by an income floor. 50 Dreikurs, a futurist psychiatrist, sees major increases in social equality. 51 By 1985 the middle class model household may earn over \$10,000 (1971 dollars) 52 to \$15,000,53 and by the year 2000, the average income may be between \$18,000-\$20,000 (1971 dollars). 54

With the decline of poverty, ethnic tensions may possibly lessen. 55 Most writers see some kind of accommodation, but with continued separation. 66 Real harmony as such is not projected because of the historical struggle between groups, especially cultural minorities. Because of physical visibility as well as entrance into the social system as slaves, blacks may still find residual stigma upon them. 57 Chicanos 58 and Indians, 59 or Neo-Americans, 60 may experience a similar situation. For the southern and eastern European community the picture is brighter, however. Increasingly, "cosmopolitans" will probably have improved positions in the American social system.

If one could give an overview of life styles in the superindustrial state of the year 2020, it would be one of fluidity of relationships and geographic mobility. 62 Generally, both consumption 63 and leisure 64 should be on the increase, local experts agree. 65 New and varied art forms may develop. 66

Communications will be ever more efficient, cheaper, and instantaneous, 67 superseding older forms of printer matter. 68

In the midst of all this, however, people may suffer feelings of aloneness, powerlessness, and alienation, a la "future shock". To overcome this, they may seek out religion, psychiatry, opharmacology, or group therapy. For the individual of the future, struggle for material goods may be supplanted by quest for self.

Social Implications of Land Use

How does the super-industrial life style translate into changes in land use? What will the future city look like? John McHale has recently emphasized the importance of life style upon future urban form. The field of social ecology traces back to Robert Park, however. Park likened man-to-land relationships to the biological world of ecology. His "Chicago School: studied the Windy City and noted certain urban forms emerging from social relationships. Among urban geographers, social ecology is called "internal form" or social space. The super-social space.

What general impact does super-industrialism have upon this area in terms of land use? Freedman and Miller note:

"Looking ahead to the next generation, we foresee a new scale of urban living that will extend far beyond existing metropolitan cores and penetrate deeply into the periphery. Relations or dominance and dependency will be transcended. The older established centers, together with the intermetropolitan peripheries that envelop them, will constitute the new ecological unit of America's post-industrial society that will replace traditional concepts of the city and metropolis. This basic element of the emerging spatial order we shall call the 'urban field'."

If social projections about super-industrialism apply, the Omaha area should expand horizontally. The life style of high geographic mobility, increased leisure, and fluidity of interaction generally encourage geographic dispersion. As Freedman and Miller note, super-industrialism requires a wider life and land space, wider choice of living environments, and wider community of interests. This projected life style also places new definitions upon the rural-urban fringe and raises difficulties in defining the urbanized area.

Predicted consumptions patterns of additional income weaken the "centripetal pull" of the central city. Both "new towns" and suburban developments with extensive services and employment opportunities also weaken the "pull". At the national level, superindustrialism engenders megapolitan growth. Megalopolis grows not only from natural increase but also from migratory pressures on both core and rural areas. "Urbs" and suburbs grow at the expense of both inner city and hinterland, robbing both of manpower and tax base.

In the Plains region, an urban network or hierarchy is formed with major metropolitan and megapolitan centers exerting "primacy" over the surrounding countryside. Economists and geographers note the dominance of Omaha's "community fields" over the northeastern

area of Nebraska and southwest portions of Iowa, including the seven county region. Other key cities in the region include Minneapolis-St. Paul, St. Louis, Kansas City, Sioux City, Sioux Falls, end the like. No strip-city formations are predicted in Iowa, Nebraska, or the Dakotas for the year 2000 (or anywhere in the Plains except St. Paul-Minneapolis and an area around the two Kansas Cities).

What about the interior of the city and the social formations within it? One classic model was provided by Robert Park and Ernest Burgess in their "Concentric Zone" hypothesis. 87 The concentric zone is a ring-like feature with Zone I, the downtown core; Zone II, a zone of high land value but low rent and low income as proprietors wait hopefully for core expansion so they can sell their land; Zone III is generally populated by the working classes; Zone IV, a suburban area populated by upper middle income groups; and Zone V a commuter zone composed of young lower-middle-class families.

Despite certain flaws, there is evidence to indicate that family ratterns are based on zonal features. 88 Generally, suburban residents are at peak income levels with fewer and older children, while inhabitants of the inner city are either younger and have yet to achieve their maximum income. Using this model, family size rises and falls within the various rings. Zone I is generally devoid of families; Zone II is heavily populated with large poor families, single people, and older couples; Zone III has large families; Zone IV has smaller families with older children; Zone V has small, young families. Hypothetically, in Omaha, the zones might run along a major corridor of Dodge Street such that Zone I might extend from the river to 18th, Zone II, from 18th to 24th, Zone III from 24th to about 50th, Zone IV from 50th to 72nd, and Zone V from 72nd onward.

These zones, first applied to Chicago, are presented here as a heuristic device; more specific information will be presented in the fourth chapter. The essential notion here is that the zonal formation expands as single nuclear families push outward looking for single dwelling units.

gested, this too will encourage scatteration. Hall has noted that in Europe classes may reside close together because a social-psychological distance exists between them. 90 In the United States, however, a classless ethic is the custom and personal avoidance is more difficult. For Americans, geographic distance then takes on greater importance. Classes have difficulty mixing because when a new group of upper income people move into an area, their land improvements raise property tax, driving out the poor. 91 Conversely, when the poor enter a more affluent area, middle and upper income are repelled by their life style and deteriorating property values. 92

The American class system thus encourages spread. Hoyt, who looked at rent data, proposed a sector theory of urban life. This model sees the city divided by major corridors, forming sectors. Urban geographers have likewise noted that class differences follow sectoral patterns. On density-distance charts measured from the core of the city, they observe family income peaking at the inner suburbs, but with some variations (e.g., Center, Dodge, and Pacific Streets in Omaha). Generally though, the data reveal greater similarities within the sectors than between them.

Traditional ethnic separation also give rise to sprawl. Many and varied forces keep minority members impacted in high density

residential areas until they "spill over" into adjacent neighborhoods. Though the Department of Labor data on minority populations are sketchy for the Omaha area, nationwide projections indicate that, at current rates, the black population should increase significantly. Their continued population growth and spatial expansion are likely to accelerate the white middle class exodus to newly developed suburban areas. Harris and Ullman, as well as Shevky, Bell, and Williams, have noted the creation of nucleated urban neighborhoods forming along racial and ethnic lines. Barger has outlined these neighborhoods in the Omaha area. 98

Lastly, if time for leisure activity increases, new outdoor recreational areas will be needed. In the past, parks have been difficult to establish because of competition with developers for land. This is a common problem in urban expansion.

If the super-industrial trends continue, Omaha along with other metropolitan areas will probably continue to expand horizontally. Zonal life cycle patterns, sectoral class divisions, and nucleated ethnic formations will continue to expand. More recreation areas will be demanded. These and other specifics of the degree of scatteration will be discussed later in this work.

SUPER-INDUSTRIALISM - NON-TREND ASSUMPTIONS

What will happen to urban form if the general evolutionary pattern cutlined above does not come about? Not all agree with the

^{*} Projections of minority groups other than blacks are not included because they constitute such a small proportion of the present population. Their miniscule number may have little impact on the urban form.

super-industrial version of a future society; other versions of the future are also plausible. From the author's research, two other social futures of major significance emerge, the "Green Revolution" and "Political Restorationism".

"Green Revolution"100

Reich's The Greening of America, which appeared late in the 1960's, was an account of the future of the United States based on the type of consciousness of various age groups. Reich sees the corporate machine as self-destructing though not through revolutionary opposition but rather through evolutionary "negation". He envisions significant proportions of youth, situated in key positions in government and industry, encouraging the "great refusal". This refusal is to reject the "false needs" (Marcuse) encouraged by advertising. The youth are said to want to avoid plastic environments and synthetic interactions. Their life style cause a cultural revolution in which these social and cultural characteristics occur: (1) lowered consumption, (2) increased leisure time, (3) lowered population, (4) post-Keynesian government, (5) racial harmony, (6) considerable breakdown of the stratification system, (7) increased communal life styles, (8) lowered defense expenditures, and (9) a new urban existence.

What might the city look like under these conditions. Scatteration would not be as pronounced; rather hinterland and central city would grow at the expense of suburban development. Small, aggregates of farmers might compete with the larger farms. The aesthetic appearance of the city would probably be heightened, with the reduction of the use of internal combustion powered vehicles in favor

of a mass transit system and small, quiet electric autos. Concentrated, amoeba-like suburban growths would diminish in favor of linear off-shoots linked by the transit system. Emphasis upon a distribution rather than a production economy would encourage a highly nucleated city built around community neighborhoods. There would be a strong Federal government-to-neighborhood relationship.

"Political Restorationism"

This approach suggests rapid change and "future shock" will become unbearable for the majority of the population. Political or cultural restoration might occur. Leisure would be diminished. 101 Intricate information systems would be utilized. 102 Tensions among various sectors of the population would bring demands for public security solutions. 103 The system would also have some environmental and energy problems. 104 Income gaps would not diminish and, on a relative scale, widen. 105 The system would be guided by an authority oriented order. 106

How might our locale look in 50 years, under this system?

Lower income areas might be highly impacted and separation would continue. Expansion would be slowed, and there would be highly sanitized transportation corridors to shield suburban tracts. Sectoral stratification divisions would endure along with zonal family formations. Diminished scatteration would be in evidence.

An Overview

In our view, the general drift now occurring will continue, resulting in substantial exurban* expansion. If a "greening" effect This is a term originated by Pace Spectorski.

should occur, vertical expansion and both urban and rural development may resume. If a neo-Luddite reaction should occur scatteration would continue but in diminished form. Looking at all three futures, however, we conclude that super-industrialism remains the "most probable" future.

CHAPTER TWO

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Yuri M. Krasnapolsky, Conductor, Musical Director, Omaha Symphony Orchestra.

Fritz Congdon, Executive Director, Omaha Playhouse.

Charles Mancuso, Manager, City Auditorium and Stadium.

Robert McKinnon, Coordinator of Parks and Recreation.

Sandra L. Wakefield, Assistant Ballet Mistress, Omaha Civic Ballet.

William O. Wakefield, sociologist, specializing in the sociology of leisure and a member of the Omaha Symphony Orchestra.

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73. As an overview to the evolution and characteristics of super-industrialism, chart below outlines various social and economic features which come to play in past, present, and future societies.

SOCIET IL TYPE

Past Societies Present Societies Future Societies

Social Characteristics

Dominant Social			
Relationship	Fellowship Kinship Neighboring Family Law	Exchange Rational Calculation State	Fluid Associa- tion
Central Institution	Extended Kin Group	Social Market or Capitalistic Economy	Social Market or Keynesian Capitalist Economy
Individual & Social Order	Self	Person	Situational Personality
Characteristic Form of Wealth	Land	Money	Experience "New Money"
Type of Law	Family	Contracts	Regional Contract
Order of Institutions	Family Rural Village Town	City Rational Cosmopolitan Life	Serial Family Ad-hocracy Decentraliza- tion
Types of Social Control	Concord Folkways Religion	Convention Legislature Public Opinion	Technology Decentralized Democracy

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LAND ECONOMICS

THE SUPER-INDUSTRIAL ECONOMY -- TREND-LINE ASSUMPTIONS

Move Toward Service Industries

The social system of the "super-industrial" state has a strong basis in economics. The key to super-industrialism is the change of focus of the means of production from basic and secondary industries to tertiary (service) and quaternary (government, research, and development) industries. This projection includes the extension of a Keynesian market system as described by Galbraith and others. The labor force would be better educated, work fewer hours, and enjoy more employee benefits. This profile of the labor force includes heavy addition in the service and quaternary sectors. As Klemme notes:

"By A.D. 2000 from the standpoint of the industrial developer, the most important changes will be found in the structural pattern of employment and the relative and absolute changes which will occur in the last third of this century. Basic employment (manufacturing, agricultural, and mining), which is the employment generating basis on which all other employment is supported, will grow by only about 4 million jobs between 1965 and the year 2000. Manufacturing will increase by some 8 million jobs, but this gain will be offset by decreasing employment in agricultural and mining. The basic supporting industries (transportation, utilities, construction, etc.), will gain approximately 5.7 million jobs but will decline from 11.4% of the total employment in 1965 to approximately 10.2% of total employment in the year 2000. The almost exploding employment potential in the fields of service, trade, and finance will continue through the year 2000. Employment in these fields will rise from approximately

26.8 million jobs in 1965 to 63.4 million jobs in the year 2000. This will account for nearly 60% of the total growth of employment in the last third of the century."

Another source indicates that by 2068 service-sector labor will reach nearly 75 percent (from 55 percent currently) while manufacturing labor will account for only about 20 percent.

Consumption and Productivity

Higher total consumption is predicted not only because of the national increase in population, but because of what Toffler calls the economics of "impermanence". He notes that new products that are produced cheaply (and thus easily replaced) will win consumer acceptance over customized and repairable goods. Rentalism is also thought likely to increase. Because of advances in technology, labor productivity should increase by about 3 percent per year. Unemployment is projected to between 4 percent to 7 percent. The average work week may be something like 30-35 hours. Daily transactions may be totally carried out by credit card. Capital investment will continue to increase because consumer outlays will continue to increase, as will government expenditures.

The vision of this part of the system is one of increasing centralization of both government and corporate enterprise, to the point where public and private resource management appear to merge. Service-related industry should dominate and overall consumption increase.

A Super-Industrial Economy and Urban Growth

How does economics translate into urban growth? Turner, in dealing with the future of urban growth notes:

"People are shifting out of primary industries (agricultural and mining) into secondary industries (manufacturing and goods processing), and out of these into tertiary industries (the service industries such as retailing, transportation, finance, entertainment, and so on), and finally into quaternary industries (education, government, and the arts). These occupational shifts have produced geographical shifts; people moved from the farm into the giant metropolitan areas, then out of them to the periphery. I predict that the geographic trend of the next several decades will be away from the metropolis to locations beyond the periphery, along arterial highways, thus creating strip cities hundreds of miles long, and to smaller cities, some of them in the strip cities, others only a short hop by high-speed transportation from the metropolitan areas."

Land economists are concerned with man-to-land relationships such as the following: (1) What is the basic means of production for an area? (2) What kinds of tax revenues are generated? (3) Is there suitable land available for transportation, industry, and recreation? (4) What is the relationship between heartland and hinterland (such as nearness to minerals and succeeding stages of production? (5) What is strategic about the area's location, such as proximity to agriculture, national markets, and other trade centers? (6) What facilities help to bring about an inward flow of materials and an outward flow of finished products? (7) Can an area attract "people to services" (e.g., defense workers to defense industries). 13

Basic theories within this domain include "trade theory", which concerns the supply of land, labor, and capital; "location theory", which deals with location of firms and industries; "staple theory", which looks at migratory processes and economic benefits; and "economic base theory", which analyzes the basic means of production of the area. 14 Though there are other theories, we will selectively draw upon only these. 15

The Omaha-Council Bluffs area has economic "primacy" over the entire functional area of northeast Nebraska, with competition from bordering trade centers in Lincoln, Sioux City, and Des Moines. Its local territory includes the seven county area, and counties farther to the south near Tarkio, Missouri and to the east beyond Pottawattamie and extending to the fringe of the Des Moines functional area. 16

Omaha is defined as mixed industrial with a strong agribusiness core. Agricultural considerations still take precedence over the service sector economy, however. The relative affluence noted in Omaha precludes defining it as a depressed area, although pockets of economic distress do occur. The nodal or supporting regions include such satellite cities as Gretna, Blair, Kennard, Bennington, and Papillion.

Given the super-industrial economy, we see the centripetal pull of the downtown core diminishing. Though there will be an additional 25.6 acres of new office space added to the downtown area, we see the core as a commuter-consumer related retail area continuing to diminish. 18

On balance we see a "competitive shift" from core to westward suburban tracts, keenly spurred on by interstate highway development and other resource endowments. One of the controversies in the future will be between relatively cheap westward land and central city redevelopment areas. Given the nature of the super-industrial state, westward expansion is expected to predominate.* The exurban industrial/commercial ring will demand more area in order to provide space for parking. As we will note later, the mass transit system will be an important element but not a dominant one. Even projections for the 1980's envision more commercial acreage because of new shopping areas which require between 3 and 5 times the space needed by earlier retail outlets. 19

The labor profile should closely resemble the current one, with the exception of increases in tertiary and quaternary employment. Even then the bases of these jobs will still be linked to an agri-business core. This does not mean that the relationship in any way will always be direct. Iredictions translate into higher percentages of employment as follows: wholesale and retail trade, finance, personal service, entertainment and recreation, and public administration. We project an unemployment rate of between 4 percent to 7 percent as presently measured. Industries with high employee turnover need a ready pool of labor resources to draw upon. On the economic side then, super-industrialism will likely promote scatteration.

New industries will be more likely to locate in the suburbs, the exurban ring, and in the nodal region (Blair, Papillion, etc.) because of the following reasons: (1) relatively cheaper land, (2) less pressure from organized labor, (3) middle income labor base, (4) less resistance from political activist groups and environmental groups, and (5) lower tax base. 22 Besides suburban

^{*} Actual commercial and industrial acreage projections will be described in Chapter Four.

growth radiating from the core out to the suburbs, we also see growth coming from the smaller towns. This is especially true with service-related industries, those not directly dependent upon the major mass transportation facilities.

The super-industrial economy will be a fluid one, but continually regulated. Much of the Plains region will remain involved with the various facets of agriculture. The Omaha-Council Bluffs region will be very similar to other areas, and at its basic core, economic emphasis will be on agri-business.

SUPER-INDUSTRIALISM -- NON-TREND ASSUMPTION

A Planned City

What would happen to urban form if this general evolutionary drift did not come about? What would happen to the city structure of Omaha given a post-Keynesian or social market economy? 23 Productivity would diminish slightly. Unemployment would be eradicated, and the tax load would be increased. Few or no low income areas would exist; stratification consciousness would recede. Much of the real national income would be channeled into the public sector. Income redistribution would occur. Housing starts would be channeled through a master plan developed by city planners.

Greenbelts, bike paths, and public housing would become more abundant. The growth in technology would diminish somewhat while human services areas would increase. Both the central core and suburban shopping areas would be redeveloped. Compact dwellings would take precedence over the sprawling ranch and split-level home. Private enterprise would be a viable subculture, especially

prevalent in the service sector. Economic growth would be regulated by a combination of consumer wishes and central planning. Omaha would grow through redevelopment and vertical expansion rather than horizontal spread. New growth, manpower, and the tax base would likely increase in both heartland and hinterland.

The Restoration City

What would happen within the city if the general drift would return to a prior economic system? For those who maximize their opportunities and economic freedoms, there would be strikingly attractive suburban homes, perhaps even large manors. Upper and upper middle income groups, which now account for 11-13 percent of the population, would be somewhat reduced but those who remain would have increased real income. The changes in GNP would vary strikingly from year to year, dramatic prosperity following years of economic slow down, and the unemployment rate would at times be as high as a quarter of the labor force. Income distribution would likely drift upward. Productivity and efficiency may increase dramatically. City expansion would not be as great, however, due to impaction of lower income individuals and higher travel costs of the average citizen.

Higher urban population density would appear as consumers come to rely more heavily on mass transportation and would gravitate to the core of the city.

Those welfare institutions now directed by the public sector would tend to revert to voluntary associations. Government would be responsible for only minimum services such as fire

protection, highway maintenance, and sanitation. With social services reverting to voluntary associations, religious life would probably take on a new significance.

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"The Liberty Amendment states that the Federal Government shall not operate business-type activities unless they are specifically authorized by the Constitution.

"It provides a three-year period for selling or liquidating the more than 700 business-type enterprises presently operated by the Government without constitutional authority. Sale of these enterprises will bring in enough money to reduce the national debt by at least twenty percent. Annual budget spending by the Government will be reduced by more than fifty percent. Revenue from excise taxes on goods and services, and on corporation incomes, will increase at least twenty percent, without increase of tax rates.

"This means that the annual revenue collected from the Federal Personal Income and Withholding Tax, the Federal Estate Tax, and the Federal Gift Tax, will not be needed. So the LIBERTY AMENDMENT will stop these three types of taxes, at the end of the three-year period."

These two budgets differ on a key item, military expenditure. The researchers see a market economy directed by the Defense Department.

PROXEMICS

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

Population and Human Biology

Population and ecological considerations have been the concern not only of sociologists but also demographers, human biologists, and others. To embrace this concern, E. T. Hall coined the term "proxemics", in its narrow sense dealing with social space (e.g., small group behavior as defined by social psychologists) and population dynamics. Here we use it to denote the broader concept of the impact of population on the larger environment, especially in its urban form.

Population Growth

Beginning long ago, but only recently noted by the general public, two opposing camps have developed concepts regarding the question of population growth. The Neo-Malthusians maintained that not only was the world at large experiencing population explosion, but that the United States also had a population problem. The most noted spokesmen for this position has been expounded by such groups as Planned Parenhood and lately Zero Population Growth and The World Population Council.

Others contest this position essentially on the argument of a low man-land ratio in the United States, relative to western Europe. The United States is prosperous enough to support a considerable increase in population, they contend. Generally, these Neo-Godwins

maintain that most problems of population increases can be overcome by technological improvements.

The Zero Population Growth groups hold that, given present consumption rates, each new increment of population makes tremendous demands upon the environment. For example, as population increases by 1 percent, energy usage increases about 7 percent a year. Solid wastes per person have doubled since the 1920's and pollution has tripled since 1900. The country has used over 50 percent of the world's resources.

In terms of the current population, "Right to Life" groups note the falling rates of population increase (down considerably from the beginning of American History except for the "baby boom" of the late 1940's and early 1950's), while Zero Population Growth points to increases in absolute numbers (an additional 2 to 3 million people each year).

Notwithstanding the ideological aspects of population changes, how does this translate into growth for the world, this country, and region? As he viewed the world population, Miles saw three possible outcomes. One dealt with population crisis and famine, a second with zero population growth, and the third - which he feels most likely to occur - with a "modified Irish curve". In this last he foresees a number of severe disasters, but not great calamities, bringing about a downward population curve to the point that by 2020 world population would resume 3 to 4 billion level we have today. 6

Turning to the American situation, the present population is approximately 215 million people. The Population Reference Bureau

no longer projects one population figure, but rather a series of figures based on varying assumptions. Series "B" reflects a swift return to the high rate of the late 1940's and 1950's such that by 2020 the population in the United States would be 440,253,000. Series "C" assumes a return to the moderately high levels of the early 1960's. Fifty years from now the population would be 385,959,000. Series "D" assumes a fertility level at the 1968 rate and thus projects 335,869,000. Series "E" projects "ZPG" within a few years and a population of 299,177,000 by the year 2020. Series "X" projects a "ZPG" rate with no immigration with a stable population of 270,447,000.

Even on a very conservative estimate it would appear that there will be an additional 40 to 60 million people living in the United States in 2020. As noted earlier, the super-industrial state is a very mobile one. Some projections suggest increased immigration. Mortality rates may decrease, and the aged may become an important political and social entity. Euthanasia may become an issue.

Population Distribution

Given these trends, the Commission on Population Growth and the American Future projects that by the year 2000, 85 percent of the population will live in metropolitan regions. By the turn of the century the metropolitan regions will have increases of 40 million persons (assuming a two-child family). The Commission sees the super-industrial state forming into megapolitan regions, with workers willing to commute much farther geographically because of high speed transit systems:

"Urban regions appear to be prominent features of the demographic future, and if our population distributes itself according to projections, 54 percent of all Americans will be living in the two largest urban regions — one stretching along the Atlantic seaboard and westward past Chicago containing 41 percent of our population, the other in California between San Francisco and San Diego, containing 13 percent."

Social and Economic Impact of Population

Since the average individual in the future is expected to consume twice as much as today, a decreased population growth rate will not hurt the general economy. Average incomes may be as much as 15 percent higher for families with two children as compared to three-child families. While a slower growth rate would probably hurt some industries more than others, no major problems should occur for any industry. Assuming a two-child family, real numbers of people would not decrease in any given age category. Public service and educational costs will be considerably lower under a two-child family regime; generally society may be more affluent.

Regional Growth

Business Week notes:

"The various regions will grow at different speeds as population shifts continue. Over the next 15 years, the mountain states are expected to have the greatest population gain, a 30 percent advance. The Pacific and middle-Atlantic regions should rise by 24.5 percent and the West North Central and East South Central regions by only 10 percent and 11 percent respectively."

The Census experts believe that most of the North-Central states can expect a continued out-migration of their population to other areas of the country. If one observes population shifts by noting changes of membership in the House of Representatives, the Plains and Great Lakes region lost seven votes after the 1970 Census. Iowa's population has remained relatively stable. Nebraska migration was balanced between immigration and out-migration. In the last decade, the Dakotas lost population, and the remaining states in the Plains grew slower than the national average. With regard to total population, all Plains states ranked in the lower half of the states; Iowa was the most populous.

In terms of urbanized areas, no city in the Plains was ranked in the top 50. When only population in urban legal limits is considered, however, Omaha was the only Plains city ranked (41st). 26 Kansas City and Minneapolis are not part of the Plains region; Minneapolis is in the Great Lakes States and Kansas City in the Border States. 27

Seven County and Local Growth

For varying reasons, many local agencies have long concerned themselves with the growth of population in this area. In 1945, then Mayor Charles Leeman and the City Council commissioned the City Planning Agency to make future projections. The Agency estimated that Omaha would have a population (depending upon migration) of between 240,000 and 248,000 by 1960. The estimate erred by approximately 50,000.

What are the future population projections for the Omaha area? Before answering, we must first look at previous figures. 29

OMAHA-COUNCIL BLUFFS METROPOLITAN AREA POPULATION 1940-1970

		Population			
Jurisdiction	1940	1950	1960	1970	
SMSA					
Douglas County	247,562	281,020	343,490	389,455	
Sarpy County	10,835	15,693	31,281	66,200	
Pottawattamie County	66,756	69,682	83,102	86,991	
Incorporated Areas	279,253	315,176	387,047	470,415	
Rural & Unincorporated	45,900	51,219	70,826	72,231	
Total Population	325,153	366,395	457,873	542,646	
Douglas County					
Bennington	326	315	341	683	
Boys Town	254	975	997	989	
Elkhorn	429	476	749	1,184	
Millard	315	391	1,014	7,460	
Omaha	223,844	251,117	301,598	346,929	
Ralston	834	1,300	2,977	4,731	
Valley	985	1,113	1,452	1,595	
Waterloo	381	382	516	455	
Incorporated Areas	227,368	256,069	309,644	364,026	
Rural & Unincorporated	20,194	24,951	33,846	25,429	
Total Population	247,562	281,020	343,490	389,455	
Sarpy County					
Bellevue	1,184	3,858	8,831	21,953	
Gretna	482	438	745	1,557	
LaVista	*	*	*	4,807*	
Papillion	763	1,034	2,235	5,606	
Springfield	370	377	506	795	
Incorporated Areas	2,799	5,707	12,317	34,718	
Rural & Unincorporated	8,036	9,986	18,964	31,482	
Total Population	10,835	15,693	31,281	66,200	
Pottawattamie County					
Avoca	1,598	1,595	1,540	1,535	
Carson	613	596	583	756	
Carter Lake	846	1,183	2,287	3,268	
Council Bluffs	41,439	45,429	55,641	60,348	
Crescent	*	*	296	284	
Hancock	256	264	252	228	
Macedonia	329	298	290	330	
McClelland	165	159	150	146	

Pottawattamie County (Cont'	(a)			
Minden	310	328	355	433
Neola	841	839	870	968
Oakland	1,317	1,296	1,340	1,603
Shelby	*	*	*	6
Treynor	219	247	368	472
Underwood	251	278	337	424
Walnut	902	888	777	870
Incorporated Areas	49,086	53,400	65,086	71,671
Rural & Unincorporated	17,670	16,282	18,016	15,320
Total Population	66,756	69,682	83,102	86,991

* Figures not available.

** A special census of LaVista, Nebraska conducted by the U. S. bureau of the Census revealed a total population of 6,388 persons as of September 1971.

DEMOGRAPHIC PROFILE, 1970 OMAHA

Population	
Total Population - Omaha	347,380
SMSA	540,142
Age	
18 or under	35 . 3%
65 Years or older	10.1%
Median Age	26.8 years
Race	
White	89.3%
Black	9.2%
Citizenship	
Foreign	15.5%
Education	
Grade School or Less	20.9%
High School	61.6%
1-3 Years of College	12.0%
4 Years of College or More	12.4%

Mr. Ronald Sagraves, Director of Economic Affairs for the Department of Planning and Programming for the State of Iowa gives these projections for Iowa counties and cities in the study region:

	1970	1975	1980	1985	1990
Harrison	16,240	15,621	15,151	14,899	14,744
Pottawattamie	86,991	88,634	90,352	92,148	93,610
Mills	11,832	11,272	10,905	10,663	10,471
Missouri Valley	3,519	3,491	3,472	3,481	3,494
Glenwood	4,421	4,230	4,106	4,026	3,961
Council Bluffs	60,348	61,004	61,703	62,486	63,117
Carter Lake	3,268	4,035	4,811	5,543	6,145

POPULATION PROJECTIONS*
Omaha-Council Bluffs SMSA

Area	1995	Increase Per Year 1960-1995
		(in percent)
Douglas County	586,250	2.02
	571,952	1.90
	557,839	1.78
Sarpy County	103,559	6.68
	101,034	6.37
	98,509	6.14
Pottawattamie County	107,120	.82
	93,148	. 39
	90,820	.26
SMSA	796,926	2.11
	966,134	1.92
	746,983	1.80

^{*} MAPA projections by 1995.

Using Series "E" projections from the Census Bureau, the University of Nebraska at Omaha Urban Research Center projects these totals for Nebraska and Cass, Douglas-Sarpy, and Washington Counties. 31

State	2020		
Nebraska	1,932,968		
County			
Cass	23,013		
Douglas-Sarpy	780,787		
Washington	18,479		

The State of Nebraska's Office of Planning and Programming suggests these figures: 32

County	2020
Cass	22,130
Douglas	545,384
Sarpy	203,415
Washington	17,785
Communities	
Cass County	
Alvo	125
Avoca	281
Cedar Creek	247
Eagle	987
Elmwood	906
Greenwood	1,101
Louisville	816
Manley	201
Murdock	330
Murray	328
Nehawka	446
Plattsmouth	8,091

South Bend Union Weeping Water	280 223 1,452
weeping water	1,.,_
Douglas County	
Bennington	1,582
Boys Town	813
Elkhorn	2,941
Millard	18,528
Omaha	450,769
Ralston	11,750
Valley	1,901
Waterloo	392
Sarpy County	
Bellevue	44,540
Gretna	2,957
LaVista	16,535
Offutt East	17,870
Offutt West	29,050
Papillion	11,130
Springfield	1,510
Washington County	
Arlington	1,265
Blair	9,807
Ft. Calhoun	1,611
Kennard	294
Washington	178
Herman	268

For the seven county region, Northern Systems makes these age-specific projections for 1990. 33

COUNTY	AGE	Male	Female	Total
Harrison	0- 4	527	493	1,020
	5- 9	571	530	1,102
	10-14	520	515	1,036
	15-19	474	486	960
	20-24	336	331	667
	25-29	509	538	1 047
	30-34	471	418	839
	35-39	617	546	1,163
	40-44	387	398	784
	45-49	525	378	903
	50-54	271	415	686
	55-59	423	381	805
	60-64	291	414	736
	65-69	375	402	777
	75+	268	463	731
Totals		6.767	7, 033	13,800
Mills	0- 4	373	354	727
	5- 9	399	372	771
	10-14	476	397	873
	15-19	407	383	739
	20-24	245	261	506
	25-29	2.84	355	639
	30-34	315	307	622
	35-39	325	382	702
	40-44	283	309	592
	45-49	225	215	440
	50-51	235	272	507
	55-59	146	159	305
	60-64	214	221	135
	65-69	160	140	300
	70-74	1 ‡5	191	337
	75+	165	246	411
Totals		4,397	4,564	8,961

COUNTY (Cont'd)	Age	Male	Female	Total
Pottawattamie	0- 4	3.962	3,737	7,700
	5- 9	3,927	3,809	7,736
	10-14	3 672	3,411	7,083
	15-19	2,921	3,047	5,968
	20-24	2,434	2,648	5,083
	25-29	4, 245	4,702	8,947
	30-34	3,420	3,511	6,931
	35-39	3,598	3,721	7,318
	40-44	2,437	2,993	5,430
	45-49	2,078	2, 106	4, 184
	50-54	1,924	2,441	4,364
	55-59	1,651	1,670	3,321
	60-64	1,788	2,208	3,996
	65-69	1,281	1,455	2,735
	70-74	971	1,539	2,510
	75+	1,083	1,800	2,884
Totals		41,392	44,798	86,190
Савв	0- 4	759	737	1,496
	5- 9	739	740	1,479
	10-14	718	652	1.369
	15-19	506	537	1,043
	20-24	547	607	1,154
	25-29	720	819	1,539
	30-34	645	742	1,387
	35-39	808	734	1,542
	40-44	495	496	991
	45-49	523	544	1,067
	50-54	370	338	709
	55-59	379	411	790
	60-64	321	278	599
	65-69	324	460	784
	70-74	208	206	414
	75+	355	449	804
Totals		8,418	8,749	17, 167

COUNTY (Cont'd)	/ go	Male	Female	Total
Douglas	0- 1	22, 386	21,741	44, 128
Douglas	5- 9	20, 946	20,610	41.557
	10-14	19, 441	18,516	37,957
	15-19	15, 109	15.954	31,063
	20-24	16,630	20, 243	36,873
	25-29	23,494	24.096	47.590
	30-34	21,312	22, 940	44.252
	35-39	20,565	20,877	41,443
	40-44	14,375	15,569	29, 944
	45-19	11,803	11,949	23,753
	50-54	8.668	9,315	17, 933
	55-59	7,791	8,761	16.552
	60-64	6, 985	8,432	15, 468
	65-69	5.772	8, 156	13,927
	70-74	3.759	5,732	9,491
	75+	4,553	8.485	13.039
Totals		223,592	241.427	465,019
Sarpy	0- 4	11,071	10,692	21,762
	5- 9	9.772	9,497	19, 268
	10-14	9,019	8,609	17,628
	15-19	5,304	5.301	10,605
	20-24	11,456	8,260	19,716
	25-29	10,565	15,779	26,344
	30-34	11,559	14, 139	25,697
	35-39	8,533	13,831	22,364
	40-44	5, 931	6,948	12.879
Y	45-49	5,037	5,029	10,066
	50-54	2,892	3,901	6,793
	55-59	3, 102	2,596	6,698
	60-61	1,208	1.569	2,777
	65-69	929	1,275	2,203
	70-74	474	672	1,146
	75+	403	636	1,039
Totals		97, 253	108,732	205,985

COUNTY (Cont'd)	<u></u>	Male	Female	Total
Washington	0- 4	638	607	1,245
	5- 9	799	679	1,478
	10-14	574	667	1,241
	15-19	706	622	1,328
	20-24	489	474	963
	25-29	592	572	1,164
	30-34	747	711	1,458
	35-39	466	609	1,075
	40-44	667	548	1,215
	15-49	340	374	715
	50-54	310	335	615
	55-59	286	263	549
	60-64	258	258	516
	65-69	187	220	408
	70-74	180	241	421
	75+	295	375	670
Totals		7 534	7.557	15,091

For the larger regions, Northern Systems makes these 1990 projections. 34

STATE OF NEBRASKA	Age	Male	Female	Total
	0- 4	72,769	70,505	143 274
	5- 9	70,631	68.834	139,464
	10-14	66,769	64,132	130, 901
	15-19	55,826	56,383	112,210
	20-24	59,052	60, 153	119,205
	25-29	71,453	78,334	149,842
	30-34	72,610	75.848	148,458
	35-39	64,532	71,714	136, 246
	40-44	51,461	53,629	105,093
	45-49	40,110	41,422	81 532
	50-54	31.811	34,615	66,425
	55-59	30, 244	33.877	64.121
	60-64	28.046	32,325	60,372
	65-69	23,672	31,020	54 692
	70-74	18,667	24,434	43, 101
	75 <u>+</u>	23,960	38,924	62,885
Totals		781,620	836,200	1,617,820

STATE OF IOWA (ont'd)	Λge	Male	Female	Total
	0- 4	122,067	114,965	237 032
	5- 9	123,435	117 245	240,730
	10-14	114,504	103,734	223, 233
	15-19	103,914	101,627	205.511
	20-24	90,992	101,927	192, 919
	25-29	122,413	120,450	242.864
	30-34	108,836	117,308	226.113
	35-39	111,790	111,997	223,783
	40-44	81,886	92,313	177.199
	45-49	71,591	74.652	116, 246
	50-54	60,706	65, 974	126,680
	55-59	53, 148	61,199	114.347
	60-64	52, 958	62,946	115,904
	65-69	43,934	56 048	99, 982
	70-74	34,694	19, 227	83 921
	75+	42,533	69,723	112,456
Totals		1, 342, 454	1,426,536	2,768,990
STATE OF S. DAKOTA	Λge	Male	Female	Total
	0- 4	24,877	23,949	43.826
	5- 9	25,008	24.024	19,032
	10-14	24, 103	22,911	47.011
	15-19	21,410	21.039	42, 449
	20-24	20,160	19,878	40.033
	25-29	24,007	24 609	48,616
	30-34	24,328	24,616	48, 944
	35-39	22,786	23,028	45.814
	40-44	17,884	18,613	36, 497
	45-49	14,387	14,531	28 919
	50-51	12,088	13,287	25,375
	55-59	11,635	14.112	25,796
	60-64	12, 236	14.043	26,280
	65-69	10,892	13 234	24, 125
	70-74	8,524	10,971	19,495
	75+	11,047	16,374	27, 421
Totals		285, 424	299,218	584.642

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Another source based on trend line projections (which assumes steady real growth but declining rate per completed family) indicates the following by 2020:³⁵

		Year 2020
DOUGLAS		
Omaha & fringe		614,400
Boys Town		1,000
Millard		18,800
Ralston		10,200
Other municipals		14,400
Rural		3,000
	Total	661.800
SARPY		
North Sarpy		92,000
South Bellevue		15 000
Capehart		14,500
LaVista		23,000
Offutt		5,500
Papillion		43.500
Other municipals		9,500
Rural		3.500
	Total	210,500
Carter Lake, lowa		7,700
	Total	879,500

Resources and Environment

Notwithstanding the ideology of population change, there appears to be a decided relationship between resources and population.

As the Commission on Population Growth and the American Future notes:

"Population growth is one of the major factors affecting the demand for resources and the deterioration of the environment. The farther we look into the future, the more important population becomes."

Some writers see the environment deteriorating on a world scale, and detect a growing feeling of global interdependence. The world's oceans and atmosphere have been subjected to increasing environmental stress. Nationally, the environmental problem is one of balancing increasing population with dwindling resources, of regaining environmental quality with economic abundance. Ecologists contend that, in the past, producers have not taken into account the externalities or hidden costs of maintaining the environment. They point to the effects of water pollution by infiltration of raw sewage, oil, and toxic pesticides into inland streams and rivers, and of air heavily infiltrated by particulate matter and poisonous fumes. Of some 200 million tons of waste poured into the air last year, the auto contributed 94.6 million tons. Further increases are foreseen in noise pollution, and due to inadequate recycling and sanitary landfills, in more solid waste disposal problems. 39

Not all researchers concur, however. Some see the environmental issue as already on the way to a solution due to aggressive action, or dismiss the issue as unimportant in the first place. Others complain of environmental concerns causing unemployment and a slowing

of industrial activity. Still others view the environmental movement as a cover for the promoters of a left-wing government.

Energy is also involved in this issue. Cook and Waring note that throughout history the industrial age has been the most devastating consumer of resources. 41

In his paper commissioned by this study, Professor Grube relates energy and environment:

"The major sources of pollution of air, water, and soils can be directly or indirectly related to the nation's energy demands and the economics of energy. Much of this energy use could be substantially reduced through effecting some changes in economic and social patterns on a national basis as well as on a local basis.

Water pollution and energy efficiency relationships can be illustrated in many ways. The power generating plant using water as a condenser coolant introduces thermal pollution. The greater the demand for electrical energy, the greater the output of thermal pollutant. The manufacturing plant that uses water in washing or in chemical processing can frequently relate its product and its process to energy use . . . the principle of built-in obsolescence requires the frequent replacement of a product at a high energy cost . . . the generally considered low cost of water and its seemingly unlimited supply provides an economic climate for abuse.

The pollutants derived from soils are of two major types: the eroded non-soluble solids which find their way into waterways and reduce the depth of the topsoil or rhizosphere and the soluble materials such as chemical fertilizers and pesticides. Chemical fertilizer use has increased many-fold in recent years and has largely replaced animal manures as a plant growth

nutrient. The departure from manure use has brought on a reduction in soil water storage capacity and an acceleration of the erosion of the soil itself. The manufacturing of chemical fertilizers, particularly anhydrous ammonia, requires the use of large quantities of fossil fuels. Thus, we have a situation in which convenience and economy lead to erosion, pollution, and at the same time an accelerated depletion of the scarce fossil fuels, particularly natural gas.

Transportation of people and goods consumed 16,500 trillion British Thermal Units of energy in 1970, representing 25% of total energy consumption and an increase of 89% from the year 1950. The increase in transportation energy consumption is due to (1) comparative low cost of fuels, (2) increased population, (3) shifts toward the use of less energy-efficient transport modes, and (4) declines in energy efficiency for individual modes. The following tables show comparative energy efficiencies for various transportation modes:

Table 1
Energy in BTU's Per Ton Mile for Freight Transport

Mode	Energy
Pipeline	450
Railroad	670
Waterway	680
Truck	2,800
Airplane	42,000

Table 2
Energy in BTU's Per Passenger Mile for Passenger Transport

Mode	Energy
Bus	1,600
Railroad	2,900
Automobile	3,400
Mass Transit	3,800 (20% load)
Airplane - Intracity (Urban)	3,400
Automobile	8,100 (28% load)

These data reflect the energy cost of the decline of the railroads coupled with the continually increasing utilization of airplanes for both freight and passenger transport. (The U. S. Postal Service now utilizes air freight service which almost completely replaces the rail service of a few decades ago.) In our urban areas, streetcars and buses have been replaced by millions of energy-hungry, individual passenger automobiles.

Space heating represents America's second largest utilization of energy — approximately 18% with an additional 3% used in air conditioning. Thus a total of approximately 21% of the energy consumed in the United States goes into temperature regulation of our buildings. Here, too, there is a considerable mismanagement in oversized buildings, little or poor insulation, expansive window structure often serving little function other than satisfying the architect's whim, poor design or entranceways, etc.

Much can be said for increasing the sources for energy to meet the growing demands made by our society, but regardless of all efforts in inputs, more intensive exploration, trans-Alaska pipelines, accelerating strip mining, gasification of coal, etc., the fact remains that this earth is finite and sooner or later we will have used up the last drop of oil, the last hod of coal. Thus, a long-range effort at conserving fuels is urgently needed along with technologies that enable us to utilize renewable energy resources: water power, tidal power, wind, and possible geothermal energy."

Contrary to this view, technological optimists look to new energy sources, especially nuclear reactors. Tapping solar energy is also thought possible, along with renewed use of coal. Offsetting depleted energy sources are readily available substitutes, they believe. Some environmentalists are not so sanguine, noting problems with nuclear reactor technology in shipment of radioactive materials, air pollution, potential nuclear disaster, and emissions of plutonium oxides.

Locally, the environmental issue has been raised in reference to air quality standards for auto and industry emissions, the thermo-nuclear power plant near Fort Calhoun, Nebraska, and for water quality in general. The Missouri River is noted for high levels of nutrients and inorganic pollutants. Other problems involve disposal of solid waste, including the quality of recycling centers and sanitary landfills.

Food Supply

Though Ehrlich 48 was warned that a doubling of population to 7 million by the year 2000 will outstrip food supply, Brown is more optimistic. 49 Brown notes that since 1967, a new wheat strain, I-38, has been developed and has proven successful in Asia. Others look to aqua-culture 50 and artificial protein 51 sources of world food supply.

The impact caused by changes in the supply of food available to this country is more political than ecological. Though the United States is quite affluent, people in some 280 counties of the Nation's 3,100 counties suffer from hunger and malnutrition. 52

Generally, rising trends of national affluence and personal wealth should reduce if not remove than condition, yet the super-industrial state may require even more food as American consumption "needs" increase.

Human Biology and Urban Form

How do the physical and ecological environment, as well as proxemic values, translate into urban form? One source holds that cities may best be viewed as "condensed regions of population". 53

Population distribution has been plotted by density-distribution curves which measure human numbers as they are distributed from core to rim. These curves indicate selected impaction in low-income areas and in other critical density regions.

With the "flight to the suburbs", center city populations have actually decreased. As Brown notes:

"Despite more people in metropolitan areas, there has been a lesser concentration of population density within these areas. This is because of expanded utilization of the land areas in suburban rings by an increase in the number of people living in these outlying areas. This flight to suburbia has been made possible through advanced technology. One of our studies shows that only about one-fifth of all commuters spend more than a half hour getting to work."

It would appear as population density increases to threshold size (15,000 to 35,000 per acre depending upon topographical and physiographic impedments), horizontal expansion will occur. A "quasi-colloidal" dispersion occurs in an amoeba-like fashion, radiating from the core of the city. In the future, given superindustrial trends, a further scatteration of population with heavy losses in core city and rural areas will occur in spite of the effect of natural increases.

One of the key features of population distribution is the migratory processes that shape new man-to-land formations. Interurban moves are most likely to arise from young white-collar and blue-collar manual workers, as well as unemployed youth. Moves are more likely to occur if there is a life cycle change in the family, improvement or diminishment of income, ethnic or racial change in the neighborhood, or a necessary personal adjustment such as conflict with neighbors. It appears that when people move, they are likely to choose a home that is near their previous home. They also consider access to the rest of the city and the distance of their journey to work.

In general, population distribution in the American city follows social and economic considerations discussed earlier, with a continual out-flow of people from core to rim as the city ages. Increases in population size lead to further increases in land consumption.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

ZPG Society

John R. Meyer, a Yale economics professor and President of the National Bureau of Economic Research, states that predicting the future is difficult for economists under the best circumstances. Nevertheless, he ventures this scenario: take-home pay in a ZPG society should improve because of reduced taxation. Savings should increase. Early retirement should become more common. The Commission on Population Growth and the American Future, on which Meyer served, predicted that regardless of the birth rate, average

family income will increase from today's \$12,000 to more than \$21,000 (in 1972 dollars) by the year 2000, even assuming that the workweek drops to 30 hours.

"The fertility rate decreased from 3.77 children per family in 1957 to 2.03 in 1972, below the replacement level of 2.1. If that low rate persists, one result will be a gradual balancing of age groups within the populace . . . The median age will gradually increase. It is now 28, but at a 2.1 fertility rate, it would reach 34 by the year 2000. Economists say that this will mean more workers with fewer dependent mouths to feed, and hence greater affluence. The U. S. Commission on Population Growth and the American Future estimated that per capita income in the year 2000 may be 15% higher with a birth rate of 2 children per family than it would if births averaged 3 per family."55

J. J. Spengler of Duke University, writing in the Population Bulletin, discusses both the advantages and disadvantages of a Zero Population Growth Society. Listed among advantages are a more affluent system caused by diminished age-dependency ratios, and more stable consumer demand from more regulated trade-cycle dependencies. He also raises the possibility of more family stability due to a reduction in the present 13 to 18 percent of unwanted births. The system would probably result in improved man-environment relationships which would bring a shift in values from economic to personal enjoyment. Importantly for the structure of urban form, Spengler states:

Since population concentration, often accompanied by maldistribution in space, is a concomitant of population growth, the slowing down of this growth will make possible improvement in the spatial distribution of the population. Interstate differences in population density, when corrected for differences in resource structure (e.g., water supply), indicate our population to be quite maldistributed and destined to become more so should the anticipated increment -- 75-100 million inhabitants and 30-40 million jobs -- be distributed at all like our present 208 million. While this increment will settle in cities and nearby rural areas, the location of these cities need not be dominated by random processes and the continuation of our goalless system of national transportation. Man no longer is bound to the soil and mineral deposits. Moreover, while he is not free to locate at will, the options available to him are many and can be increased by miniaturizing plants of optimum size. Most men, being 'job-takers', must, however, settle where 'job-makers' provide employment."

"Since about one job in four is provided by 750-850 business firms managed by perhaps 10,000 'strategic decision-makers', collective locational freedom is very great, particularly given supplementary assistance at the hands of public corporations and private enterprisers, mainly in the form of infra-structure and residential facilities. These strategic decisionmakers should be able, over the next 50 or more years, to establish self-sustaining bases for 400 to 500 or more new cities, in less populated states, away from currently growing concentrations destined to be short of water as well as space. The new cities could accommodate both the prospective increase in the nation's urban population and the increasing number who are fleeing the disadvantages, including high vulnerability to the thermo-nuclear extinction, associated with today's metropolitan and megalopolitan concentrations, many of which are collapsing under the weight of economically dysgenic social metabolism.'

Disadvantages accrue from: first, an aged population (some 11-17% of the total) and corresponding increases in the demand for social services. Second, advancement within formal associations will be more difficult. In terms of the labor force, slowing down the rate of population growth may intensify the task of maintaining inter-industrial, inter-occupational, and inter-national balance.

Spengler also envisions political difficulties concerning income distribution in a no-growth system, and controversies over higher inflation. 57

Locally, a stabilized population would free income spent on expanding public services, such as sewer construction and welfare. While rapid horizontal expansion would slacken, some continued scatteration would occur from other sources. Energy shortages might induce a return of many to less energy-consuming mass transit. Energy concerns generally would be alleviated as a result of diminshed population growth.

Right to Life

The Wilkes have indicated that birth control is not an issue for those people who do not perceive societal problems even in a highly populated country. Si Given the falling birth rates which have persisted since the establishment of this country, return to a high rate appears unlikely, although the present low rate may turn out to be only temporary. As Samuelson notes:

"Certainly improvements in techniques of birth control play a role. The pill, loop, sterilization, legal abortions, all contribute to the decline in births. A presumed increase in frequency of sexual intercourse is more than offset by effective use of birth control.

The loosening up of the Catholic Church since Pope John has meant both a sharp drop in aspiration goals of Catholic couples and a sharp rise in their ability to achieve their projected goals for family size. Another generation of convergence between Catholics and the rest of the population in these matters would result in practically no remaining differentials.

Birth rates of blacks, although still higher than those for whites, are also converging down. The differentials that existed in the 1920's between the rural masses and the educated middle classes are also narrowing significantly." 50

If there is a return to the traditional role for women, a value-orientation toward large families, and the attraction of high turnover industries requiring manageable pools of labor (as has occurred recently in Japan) fertility rates may increase, however.

With a national population of 440 million (Series "B"), Omaha's share may be in the area of 800,000 to one million. It is possible that the Omaha-Council Bluffs area could double its present size.

What type city would this bring about? The sprawl may scatter to the limits of the city and around the proposed lakes. Start-up costs would mount, and tax rates would soar. Land developers would prosper and the age-dependency ratio would increase. There would be a booming youth market, but there would also be periodic energy shortages and, unless life styles and consumption patterns changed radically, more pollution. Omaha would begin to take on metropolitan functions and problems.

In summation, however, it would appear that population growth rates will stabilize but that increases in absolute numbers will place additional demands upon the environment. Energy will probably not be a permanent problem because of America's economic position and national strength. Notwithstanding ideology, the authors assume that super-industrial nations will not suffer to the degree

less developed nations will. Moreover, new energy sources will be tapped extensively. Despite environmentalist opposition, nuclear reactors will contribute increasingly to the nation's energy budget.

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Mr. Roy Creep, Department of Anatomy, Harvard Medical School: "That man is becoming more numerous is common knowledge. Population pressure is felt in many aspects of our daily lives. We feel it in the morning traffic, in housing, in pollution of our air and water, in the destruction of natural beauty, and in the gradual erosion of individual freedom and loss of privacy. From the air, likewise, one sees the ugly, cancerous growth of urban sprawl with metastases extending into fresh cuts of the bulldozer."

Mr. Luther J. Carter: "Mention of the impending world population crisis usually has evoked images of undernourished, famine-threatened villagers of underdeveloped countries such as India, Egypt, and Haiti. Now, however, population growth is coming to be viewed as a serious domestic as well as a world problem. With only 204 million inhabitants in a territory of continental size, the United States is, by comparison with many nations, thinly populated; but the concentration of people in the larger urban areas, especially those of the Northeast, California, and the Great Lakes states, is making many Americans uneasy about the chamber of commerce belief that bigger means better.

"Increasingly, it becomes evident that bigger is likely to mean more urban sprawl, more air and water pollution, more traffic congestion and teeming ghettos, and more overcrowding in schools and recreation areas. And, if 200 million Americans are too many, what about 300 million, the number forecast for the year 2000, or 400 million, the population forecast by some for 2040?"

Mr. Walter E. Howard, a vertebrate ecologist in the Experimental Station, University of California, Davis: "Affluent societies have also been labeled 'effluent' societies. That man is a highly adaptable species that can live in polluted environments, in extremely crowded conditions, in situations of acute malnutrition, and in some of the most depressing of environments is well exemplified today. But why should he? And how much lower can he sink and still survive as a 'successful' species?

"Mushrooming with the population are pollution and litter. We produce 70% of the world's solid wastes but have only 10% of the world's population." "The Population Crisis Is Here Now," Bioscience,

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GEO-POLITICS

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

Political Culture

American political culture reflects the early beginning of our country in a "conservative" revolution that extended political freedom while protecting private property. Its unitary ideological base is attested in the striking continuities of political platforms. Unlike England, France or Italy, the American experience has been singularly free of "alien" influences and doctrines. Ensuing governmental policies have increased America's position from that of a small, isolationist, agrarian republic to a large industrial system with vast military and political power.

Not all agree about the functions of American political culture. Those on the political right see a market system that has become protectionist for the large corporation while driving out the small entrepreneur. They feel that the only viable system is a government that governs least. They believe that the market system will then force a general decentralization of wealth and power. 3

On the other hand, those on the left see a system increasingly centralized as the natural outcome of the market system, serving the dominant economic interests without regard for distributive economic justice.

A word originally coined by MacKinder, geo-politics, is used here in its broadest sence to connote how political structures emerge and interact with man-land relations. Both right and left share the vision of a small elite dominating the system, insulated by layers of bureaucracy and armed by pervasive institutional controls. Both maintain that democratic processes are corrupted by the existing party system and formal political bodies. Both feel that the two major parties are the same or similar. The right sees the parties leading the country toward socialism and later communism; the left sees the parties leading the system toward a fascist state masked by outward forms of liberal rhetoric. Both feel that the elite control the political "center." To both, the center is dead center, a source of resistance to change.

A third view, political centralism sees a wide array of choices within the system. Writers with this view have the basic premise that the political culture is the will of the people as voiced in public opinion polls. Schumpeter, Galbraith, and lately Scammon & Watenburg maintain that there are countervailing forces within the system which check each other's powers. They maintain that as each block grows larger, the centralization process has brought forth countervailing blocks of organized interest. At worst, the political mass are only semo-soverign but periodically organize around issues and exert their will through selected lobbyists as well as elected representatives. Issues rather than ideology are the sinew of the body politic.

Futurist literature implies that, for the most part, trend-line projections of super-industrialism picture a countervailing Keynesian system. As Scammon, political analyst and author of
The Real_Majority">Majority, writes:

"Perhaps this isn't what futurists should say, but I don't see great changes in the next generation in our political system. I don't see it in our institutions. I don't see it in the pattern of the population that supports the institutions. I don't see it in the political system itself. That fact of the matter is that unless we predicate very wide changes among the people themselves -- in their attitudes, in their habits, in their ways of going about their affairs -we won't find changes in any of the institutions or in the politics of our system. A democracy like ours, in which people are very closely related to the political structure, is one which changes as need is indicated from people. A great need was indicated in the depth of the depression, and changes were made. But even those changes, and even the changes most illustrative of postwar American -- the explosion of the working class into the middle class and the flight from the land -- are still more or less in the old pattern. I would say that if one looks at the future for 10, 20, 30 years, one does not see an American politics substantially different from what it is today. By the year 2000, I would think, the flexibility of our system will likely have produced a number of adjustments, a number of ameliorations, and perhaps new ills, but I wouldn't think it will have produced major over-riding changes."5

The Commission on the Year 2000 likewise sees a future government quite similar to our own, slightly more collectivized, and more integrated to a world order. Senator Humphrey sees more future planning; Mesthene sees more available choices in this future political system; and Madden, Turner, and Shils see the continuing viability of the Keynesian market system.

National and International Political Systems

The actual Federal governmental structure appears to be increasingly presidential; continuation of this trend is expected, 10 (Watergate notwithstanding). A brief, open-ended questionnaire was sent to 23 key Congressional figures who either had a national reputation or who represented the Plains area. Of the 25 percent who responded, the majority expected no dramatic changes in the trend. 11

Panel studies of national attitudes indicate that the American electorate is concerned about environmental issues, wants government as its employer only as a last resort, and (especially white respondents) see the city getting worse. Most segments of the public are suspicious of big government, big business, and big labor. It would appear from public opinion responses that no major or radical changes will occur.

On the international scene, the picture does not always appear as tranquil; the trend-line assumption depicts a world still fraught with conflict. One source sees small-scale nuclear wars; 13 another sees calamity without world government; 14 a third envisions new major struggles over the oceans resources. 15 Hamil sees the Communist bloc having trouble with the future 16 and Fascell projects more conflict in Latin America. 17 Brown is optimistic about the Third World, however. 18 Japan will probably soon be the most affluent nation in the world, 19 according to Abegglen, 20 though the energy crisis has tempered that prospect. ABT contrast: what alternative impacts technology will have on world politics. 21

The Impact of Technological Change on World Politics Two Extreme Views of the Next 10 Years

TERRIFYING THREAT

Technology is viewed as general power for evil and disruption that for good that will lead to a may produce destructive, violent disorders.

UTOPIAN PROMISE

Technology is seen as a power creative, peaceful world order.

Nuclear Weapons

Spread of nuclear weapons to West Germany, Israel, Egypt, India, Pakistan, Indonesia, Japan, South Africa, Brazil, Congo, Argentina, Venezuela.

Britian and France abandon nuclear weapons. Only U.S., U.S.S.R., and Communist China remain as nuclear powers. Increasing arms control. Unilateral disarmament by all but U.S., U.S.S.R., and Communist China.

Space

U.S. - U.S.S.R. - Western Military space race.

Peaceful. joint, U.S. - Soviet exploration.

Cheap Transport

Mass Migration of Indians and Chinese to Latin America and Africa, with consequent revolutionary pressures.

Mass cultural exchange among U.S., Western Europe, Soviet Union, and Communist China. Mutual toleration and appreciation. Flourishing world trade.

Communication

Increasing obtrusiveness of world inequalities arouses a sense of grievance among poor populations. Hatred of rich nations by poor leads to numerous revolutionary conspiracies.

Mutual understanding among governments and populations.

Decline of ideological and racial conflict with mutual information exchange.

Information Processing

Pervasive control by "population police." Computer solidifies repressive regimes everywhere, exacerbating revolutionary pressures.

Automation creates mass economic crises.

Optimal problem solving, resource allocation, and forecasting ameliorate social tensions. Increased productivity reduces inequalities. Regional integrations lead to world government.

Education

Increased awareness of inequalities. Impatience of newly educated with old elites' privileged status. Increasing revolutionary violence in Latin America, Africa, Asia, disorderly social changes in the United States and Western Europe.

Increasingly effective, rational government in the developing nations. Revolutionary energies are harnessed to nation-building.

On the International level, Kahn envisions this distribution of countries in terms of their development. $^{22}\,$

Population, Income and Technology in the Year 2000

		Population (in millions)
1.	Visibly Post-Industrial (\$10,000 per capita income 1965 dollars) United States Japan Canada Scandinavia, Switzerland France, West Germany, Benelux	320 320 120 35 30 160 665
2.	Early Post-Industrial (\$5,000-\$10,000 per cap United Kingdom Soviet Union Austrailia, New Zealand Italy, Austria East Germany, Czechoslovakia Israel	55 350 25 70 35 5 540
3.	Mass Consumption and Largely Modern (\$2,000-\$5,000 per capita) Spain, Portugal, Poland, Yugoslavia, Cyprus, Greece, Bulgaria, Hungary, Ireland Argentina, Venezuela Taiwan, North & South Korea, Hong Kong, Malaysia, Singapore	180 60 160 400
4.	Mature Industrial (\$500-\$2,000 per capita) Union of South Africa Mexico, Uruguay, Chile, Cuba, Colombia, Peru, Panama, Jamaica, etc. Turkey Lebanon, Iraq, Iran, etc.	50 250 75 75 700

5.	Large and Partially Industrialized (\$200-\$500 per capita)	
	Brazil	210
	Pakistan	250
	China	1,300
	India	950
	Indonesia	240
	U.A.R.	70
	Nigeria	160
		3,180
6.	Preindustrial or Small and Partially	
	Industrialized (\$50-\$200 per capita)	
	Rest of Africa	350
	Rest of Arab World	100
	Rest of Asia	300
	Rest of Latin America	100

A survey of 120 countries shows military expenditures rising faster than either population or gross product. 23 Karnish sees the spread of nuclear weapons to many countries. 24 Given the generally accepted trend-line projections, a large military system is projected for this country. 25 Not all agree on what the function of the military in this country will be. One camp envisions the military as a protector of world order; 26 another views the military as the protector of corporate capitalism and a wasting agent in the United States. 27 There are optimistic accounts of a future devoid of violence and threats of nuclear holocaust, however. 28 For this country, however, trend-line analysis projects continuing war and war-related activities. For whatever reasons, America has been engaged in war activities about three-fourth of her history, 29 and it is therefore unlikely that there will be a decline in military expenditures. Due to the economic position enjoyed by the United States, social and cultural forms which describe "Peaceful" societies may not emerge. 30

LOCAL AND REGIONAL GOVERNMENT

Governmental Form

Trend-line projections do not indicate major changes in this area. While general national-local relationships have been developing from Federal to regional and state, county and local levels, political conservatives want to maintain a Federal-state relationship. From the early days of Calhoun and his doctrine of the concurrent majority, the Federal-state relationship has given a conservative bias to political structures. The Whereas liberals look to a Federal-city-neighborhood relationship as benefitting their constituencies, they see state legislatures as parasitic drains upon city revenues. 32

Another question concerns government structures. The urban coalition of minorities, college youth, white liberals, city mayors and downtown merchants would like to see a uni-gov* as a central feature of city government. Correspondingly, Wood demonstrates that a situation of divided and overlapping jurisdictions is consistent with the ideological retreat from the city. Suburban government can provide more local attention and may cost less because city resources can be tapped. Though a parasitic relationship, it is beneficial to suburbanites.33 Trend-line projections do not indicate overwhelming changes in governmental form or its geographic constituency.

^{*}Minority groups are not much attracted to this form because it diminishes their political power.

Crime

For whatever reason, the United States homicide and overall crime rate is the highest among industrialized cultures. The explanation for why crime is so widespread has many facets;
(1) permissiveness, (2) the gun culture, (3) few police per 1000 population, (4) media encouragement of crime, (5) few judges per 1000 population, (6) "rehabilitation centers" as recidivist reinforcement centers, (7) Warren Supreme Court decisions, (8) easy bail, and (9) poverty. In terms of projections, using trend-line assumptions, one would still see a prevalence of crime but gradual reduction through technological applications.

Schwitzgebel suggests new electronic devices can monitor parole and other offenders, ³⁷ and satellites may monitor large city areas for individuals with certain receptors implanted or carried on their bodies. ³⁸ As Moore notes, "The criminal will face such an arsenal of technology that prosecution will be inevitable." ³⁹

Though capital punishment may continue to decline renewed efforts toward rehabilitation may not occur, 40 though one local expert predicts higher educational attainment by police officers. 41 Fear of crime will remain a strong incentive for suburban living. As a defensive measure against crime, new fortification of housing is predicted further increasing spread. A recent survey disclosed:

The rise in crime and violence in the United States is influencing the type of "extras" offered by home and apartment developers. In Atlanta, developers are placing guards in gatehouses at the entries to garden apartment complexes and multi-complex developers are offering the

protective services of their own radio car-equipped security forces. Near Washington, a subdivision of \$200,000 homes is being planned with security as its major theme. Plans to make the development "trespass-proof and vandalism-proof" include an encircling wire mesh fence, only two entrances, both flanked by guardhouses, ID cards for residents, and a private minibus to bring children to a regular school bus stop at the front entrance. Similar but less expensive fenced-in communities exist in New York and St. Louis.

The National Advisory Commission on Civil Disorders suggested that crime will be a key to the shape of the emerging cities, sprawl, high-speed interstate road systems and protective housing all fit this pattern.

Welfare

In the past, Anerica's welfare system was the responsibility of voluntary associations, government assistance being limited and generally punitive. 43 During the "New Deal", welfare was extended but failed to dissipate the "culture of poverty." That target was attacked during the 1960's by the Johnson administration's "War on Poverty." Moynihan deemed it a failure. Since then, income maintenance programs favoring middle or lower income groups, sometimes with work incentive added, have been proposed. Trend-line projections indicate, however, a continuation of existing practices, though possibly more selective and restrictive. The income maintenance program is quite unpopular and the idea of government as the employer of last resort contradicts the private enterprise system. If the country becomes more collectivized, there may be improvements for the poor, but radical change is not projected. 45

Medical Care

Medical care is not thought to change dramatically if one accepts trend-line projections. Though there will be technological advance, distribution of medical care should remain relatively constant. With the general trend toward suburbanization, a large number of doctors in the Omaha area have relocated their practices accordingly. The most liberal swing would probably be a national health service with government subsidizing both hospitals and organizations having expensive hospitalization plans. Comprehensive health would encounter stiff and effective resistance by powerful medical groups. 48

Education

Projections for education are less confidently asserted, but Professor Weckmueller's "scenario" for Omaha* points out some likely directions:

"One central district will embrace the greater Omaha metropolitan area. The governing board of this district will be supplemented by local boards of education which will be immediately responsive to local needs. These boards will serve neighborhood systems of from five to ten thousand people.

^{*} Footnotes added.

The central district will operate basic support programs such as computer service (computer assisted instruction will be available to every classroom), physical and mental health services, diagnostic service for learning disabilities, in-service education, film and tape banks with delivery systems, and supply purchase. The central district will also be responsible for establishing policy over basic curriculum, pupil and staff personnel programs, and fiscal and educational accountability.

Local boards will have the authority to adjust programs and personnel within the framework of abovementioned policies. The total financial base for schools will rest with state and national taxation programs. Financial resources available to schools, on a per pupil basis, will not vary from district to district except where there are clearly unique educational problems. These exceptions must be approved at the state level. States will have the authority to assist private and parochial schools.

Large areas such as Fontenelle Forest will serve the district schools as nature-ecology study areas. Business and manufacturing firms will open their doors to greatly expanded vocational study programs. Much, if not most, educational activity will be carried on outside of the walls of buildings designated as "schools". The colleges and universities of the area will meet the cultural and technological educational needs of citizens of all ages. The years for formal education will no longer be restricted primarily to ages five to twenty-one.

Private and public educational institutions will cooperate closely to meet the educational needs of the area. It will be recognized that the unique freedoms enjoyed by each type of institution complement each other to the benefit of all citizens.

Because sophisticated educational hardware and software will lighten the teaching burden in the cognitive domain, the individual teacher will have more time and energy to serve children in the affective domain. This shift in teaching emphasis

will require massive educational renewal efforts. Teachers will have to be far more competent to deal with human relations and mental health problems. It will be recognized that the most basic problems confronting man lie in the field of human relations." 52

Others have added the educational park system and the voucher plan to Professor Weckmueller's forecast. Still others have 53 emphasized the decline of "diplomaism" and the resurgence of career and vocational training. The addition of futures studies 54 to the curriculum has been suggested. Since over one-half of 55 the population will have some college training by the year 2000, large university cities may emerge. 56

In summary, we present Michael Marien's taxonomy of trend-line changes in the educational system for industrial (closed system) and post-industrial (open system) society. 57

> From Yesterday to Tomorrow The Basic Long-Term Multifold Trend in Education

CLOSED TEACHING SYSTEMS

OPEN LEARNING SYSTEMS

Alternate Titles

Teacher and/or institution

Loose system

centered

Tight system; rational

mechanics; cause-effect

Learning-centered; inquiry approach; developmental; discovery

Student and/or child centered

paradigm

education

Control-centered

Western culture as superior to primitives, heathens, noble savages, and the under-developed; us-them: emphasis on differences

Humanistic, pan-cultural; us: emphasis on similarities

Student-Teacher Relations

Students are a collectivity
Teacher as authority, student
as follower; control as
instrumental technique
Feeling withheld; I-It
Single teacher

Compensatory education for
exceptional children, the
physically and linguistically
handicapped, the underprivileged
Professional as learning facilitator or senior learner;
student as junior colleague
Feelings exposed and respected,
student evaluation of teachers;
I-Thou
Multi-adult exposure, team teaching,
guests, differentiated staffing

Student Conduct

Compulsory attendance; no choice of institution

Physical punishment for "misbehavior"

No student recourse for injustice Dropping out is fault of student; shaming for ignorance

Established rules and routine

Optional participation; alternatives offered

Counseling for personal difficulties

Ombudsman, legal measures

Many possible sources of failure; environmental, institutional and individual

Democratic development of rules and routine as necessary

Feedback

Formal, mechanistic, "Right" answers

Strong reliance on quantitative measures

Multi-faceted, formal and informal, open-ended
Use of quantitative measures

as necessary

Rewards

Grades, fixed proportion of failures, class rankings, honors,
medals, degrees
Recognition through competition
in a few areas of excellence
Learning has vocational and
social utility

Pass-fail, non-grading

Deemphasis of competition, promotion of diversity and many areas of excellence; a taste of success for all

Rewards of learning are inherent

Goals

Socialization, training, moral education, passing on civilization, knowing; education of intellect only

Getting an education, being educated, terminal education

Development of whole individual,
investigation of cultural heritage, questioning
Learning how to learn, lifelong
learning, education as a beginning

Extra-Classroom Environment

Restrictive, "In Loco Parentis"

Physical and intellectual

separation from world

Permissive, largely peer controlled Interlinkage of school and life, "School Without Walls"

Space

"Grid" architecture, stationary furniture Arbitrarily assigned seats Omnidirectional space and flexible furnishings, choice of environments Teaching in classrooms

Specially designated learning institutions, outside learning ignored

Student freedom to choose seats
Learning in classrooms, learning
resource center, home, dormitory, community, world
Recognition and encouragement of
formal and informal learning
opportunities throughout
society, equivalent credit for
outside learning

Time

Collective pace
Ordered structure of class hours
and course credits
Uninterrupted schooling,
followed by uninterrupted
work

Individual pace
Flexible scheduling
Learning and work interspersed
throughout lifetime; learning
a living

The Urban Crisis vs. the Logic of Metropolitan Growth

In the balance of political economy, one summary impression
is this:

"Urban experts no longer feel, as they did twenty years ago, that drastic interference with the urban system can correct a drastic problem. For example, the programs to eliminate slums not only failed to achieve their goals but created other problems through the relocation of the poor. The truth is, everybody is tired of cities. Harvey S. Perloff remarks, "We could build great cities today, but I don't think that we have the will to do it..."

A rightward shift would give increased control to states over cities, fewer categorical grants and more revenue sharing, and renewed importance to county divisions. Shift in a leftward direction county and states influence would diminish over urban and regional centers and strengthen government at the local level.

One interpretation, of the forces that shape urban form takes the position that, historically, America has always had an anti-58 urban bias. Though we are now becoming a nation of cities, city hall remains a bastion of anti-urban bias. The merchant community wants only from the city that which will generate profits, and city hall is the arm of merchant elite. Local developers have free rein in chewing up even more agricultural land for profit. Systematic planning is overwhelmed by the elite and their ability to command resources. Cities are tyrannized by suburban and rural-oriented state legislatures. The suburbs are parasitical, drawing money from the city but not providing a tax base in return. Housing legislation, property tax, slumlords, highway funding all work to cripple the city. Not only has the urban area suffered from this, but also the farm and rural areas. Reformers in the past have proposed Rural Reconstruction Acts, economic floors, taxes based on income rather than property, the use of private agencies to stimulate the city, industrial parks, uni-gov, city redevelopment, city-state approaches, model cities, urban renewal, as well as grants to industry. Despite all this, the urban crisis persists.

As John McHale points out, "urban planning requires fiscal planning." City planners have for years looked longingly eastward toward the greenbelts, well-planned housing, and efficient mass-transit systems of Western Europe. Our political and economic system are considerably different, however. We do not see such changes coming in the United States, given trend-line assumptions. Our experience of the last 50 years suggests that there exists a potent center-right coalition which will strive to preserve the present economic arrangement, and thereby perpetuate and intensify

the urban crisis. Notwithstanding the rhetoric of reform, income redistribution has not come about. Relative income distribution has remained nearly constant for 50 years. Going back to President Roosevelt, who ran in 1932 on the platform of a balanced budget, the aim and achievement of the "New Deal" was, quoting Jimmy Burns, "to preserve the system." Since that time, most successful candidates have been moderate-conservative Republicans or Labor 60 Democrats. "Liberals" have been few and have lost overwhelmingly 61 at the polls. Generally, the United States is more conservative than her industrial counterparts abroad. This reflects in the shape of cities and city life. Sprawl and spread appear to be in the cards for American cities.

If one contemplates the coalitions which will form in the future, one is impressed with the probability of a resurgent conservative coalition. Even during the liberal years of the 1960's, The Congressional Quarterly notes that the conservative coalition (conservative Republicans and Southern Democrats) won on the average between 70-80 percent of the issues raised, not counting numerous other issues stifled in committee. 62

One must also consider material contained in two recent books by Kevin Phillips and Scammon & Watenburg. Phillips argues that there is an emerging coalition of suburbanites, whites, the business community, the plains, South, and Southwest, and religious fundamentalists which insure a Republican majority. Unfortunately for Phillips, he would have been more correct had he said a Presidential majority. From our perspective, the

moderate-conservative of either party, a Ford or a Jackson would have a good chance of winning, if the Conservative majority were not split by an even more conservative candidate like Wallace. Scammon & Watenburg caution that a liberal should judge the issues, playing down the social and playing up the economic ones. The latter evoke "New Deal" nostalgia and populist appeal. What adds up to these authors is a continuation or strengthening of the conservative coalition in national politics. "New Politics" of a liberal stripe appears viable only in local elections.

What this brings us to is that Banfield's logic of metropolitan growth appears to be a trend-line projection for what will occur urban form. Banfield indicates that every city administration has at least three elements which narrow their base of choice:

(1) population increase, (2) technology and its impact on jobs and transportation, and (3) the distribution of wealth and income and its impact on new housing. Accordingly, Banfield asks, "why urban crisis?" "Urban crisis" to him is a definition conjured by the middle-class liberals. Urban decay is really just the working-class and lower-class life style. The middle class defines environment aesthetically and the working class defines it functionally. So the classes (middle vs. the working class and poor) do not mix. As the lower classes and working classes spread, the middle classes and upper classes move farther away from the central city.

Spread was also encouraged by mechanical refrigeration and canned food which displaced boarding houses and restaurants as neighborhood centers. The automobile and modern highway construction

allowed the middle class to flee to their new FHA-financed homes in the suburbs. The GI Bill, GI loans, and tract housing also helped encourage spread. After World War II, due to farm fore-closures, there was a rapid influx of blacks, southern whites, and unskilled workers into the city, further heightening the middle class flight to the suburbs. Having left the central city, they return by car to work and perceive an "urban crisis."

According to Banfield, there is actually less substandard housing and fewer poor today in the city than ever before.

Banfield's suggestions on ways to improve the city include: (1) totally stopping population growth now, (2) discovering technology that will make building upward cheaper than building outward, and (3) effecting major income redistribution (which cannot be envisioned in a private enterprise system).

Liberal reforms, of public housing, urban renewal, ZPG, services strategies for the poor, appear likely to be doomed. And sociologists, urbanologists, city planners alike are suspect for liberal reforms that have backfired. The urban coalition is shaky because to many blacks, urban reform means urban renewal which also may mean "Negro removal." Suburbanites are antagonistic or apathetic and Americans of southern and eastern European heritage see urban reform as something to benefit blacks. According to Michael Novak, the latter envision the "good life" as centering on local neighborhood and parish interests, rather than the "good world" of the larger societal millieu.

GEO POLITICS

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CHAPTER THREE TRANSPORTATION AND HOUSING

INTRODUCTION

This chapter discusses the social and economic implications of two highly visible and important features of urban form, transportation and housing. Transportation will be discussed first. The purpose of this chapter is to give the reader a broad general outline of why certain transportation and housing patterns currently exist and why certain patterns may emerge in the future. When pertinent, description will extend to all levels from national to local. Alternative scenarios will be presented, and the authors own projections and estimates will be included.

TRANSPORTATION

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

HISTORY OF TRANSPORTATION

The beginning of the American city can be visualized as a tightly compacted area where mobility was by foot or animal power. Up to World War II, mass transit systems were major carriers for many in the city. From that time period on, the automobile became the vehicle of personal conveyance.

Mortimer gives an overview of the early problems of mass transit systems and why they failed during the war years.

"...Some of these financial failures were due to poor planning, inefficient operation or even financial chicanery. There were other failures caused by excessive and unrealistic demands written into transit franchises. Most transit companies were required to remove the snow, not only from their tracks but also from the adjacent traffic lanes of the streets. They were required to sprinkle the streets to keep down the dust and the blowing of the pollutants. Often the companies were required to build and operate lines into undeveloped areas of the community or to operate all night "Owl" service on lines where the crews' main problem became loneliness. Since there was a lot more patrons than stockholders, the companies were convenient whipping boys, and holding the fare down became a favorite vote-getting project for the local politicians. While wages and power costs increased with the years, fares remained comparatively constant. When one views the buses, trains, tracks, and depots of a modern transit system, it is difficult at first glance to realize that a transit system is a labor intensive system. A quick check of a typical transit system's operating report will show how much money is paid out in wages."

Since the war, support for the system has diminished in most areas. A MAPA report indicates the situation in and around Omaha:

"During the past decade, ridership on the Omaha Transit Company (OTC) system has dropped from over sixteen million revenue passengers annually to about eight million (a 51 percent decline in ridership). This decline has paralleled the national trend for the first half of the sixties, but accelerated in the last half and developed a patronage drop much greater than the industry average. In an effort to maintain the revenue/cost balance, the company increased fares a number of times during the period: to 25¢ in 1966, 30¢ in 1968, 35¢ in 1969, 40¢ in 1970, and 45¢ in 1972. Even with the fare increases and service reductions, a deficit operation was forecast for 1972, and OTC announced that it would cease operation on June 30, 1972. Although detailed information is not available for City Transit

Lines, Inc. (CTL) in Council Bluffs, Iowa, it is apparent from a history of fare increases and the fact that the city of Council Bluffs was subsidizing the operation that a similar trend was in existence there. CTL also announced an intended cessation of services to be effective June 30, 1972."

Thus the automobile emerges as the predominant mode of transportation. Data indicate that urban Americans will use the autofor even the shortest trips. In many instances, anything beyond three blocks requires the car.

THE AUTOMOBILE

The popularity of the automobile appears to be viable and enduring. Auto sales (new and used) should not dramatically decrease throughout the 1970's and into the early 1980's. Some optimistic projections for the year 2000 envision nearly one car for every adult. Lindsey notes that the auto is expected to remain the country's number one means of travel.

Why the success of the car? Kieffer (p. 258) writes:

"What is there in the automobile's hold on the public that could be usefully incorporated in transit planning?

- 1. An origin-to-destination method of transportation.
- 2. Normally available at all times.
- 3. Goes in any direction at the whim of the driver.
- 4. Doesn't have to stop and pick up others.
- Provides privacy and reasonable safeguards against the annoyance of others.

No other method of transportation since the horse and buggy has afforded such advantages to the individual driver and his family. $^{"}_{8}$

To add to the success of the automobile, an elaborate road and highway system has emerged. A motorist can now drive 1,800 miles non-stop, except for toll booths and gasoline fills, from Massachusetts to South Dakota. The interstate highway system is now about two-thirds complete. Projections are to link every population center of 50,000 or more. Deven land around the interstate has increased in value.

In the study area, it would appear that the socio-economic system is highly adapted to the automobile. Nebraska state's six-year highway programs do not list contracts for transit or aggregrate transportation concepts. The researchers were impressed with the summary report of each state in the 1972 National Transportation Report, while the report favored and outlined the uses of mass transit systems, the Nebraska summary demurred:

"The Nebraska Department of Roads, however, had strong reservations about the conduct and intent of study regarding time constraints, data limitations, and theoretic context of the study, and especially regarding the possibility of future diversion of highway funds to non-highway programs."

Highway use has bourgeoned in the study area, with heavy stress patterns indicated not only on Interstate 80, but southward on highways 34, 73, 75, and northward on highway 77 to Fremont. 14

If the auto survives in the future, however, it may change, as indicated by Financial World:

"...The transportation and travel field will be one of the giants in the U. S. economy over the next 65 years. The motorist probably will be driving a car with a different transmission system, and a radically new engine, as compared with those in use today. And he may not even have to steer the vehicle, — it will be propelled down a highway merely by keeping it fixed on an electric beam."

Others suggest changes just as dramatic. 16

MASS TRANSIT FORMS

Not everyone is enamored with the auto, however. With continued growth in the cities, there appears to be another approach to the carrier operations. 17

"Los Angeles is planning two express lines for buses only on a stretch of the San Bernadino Freeway. Mansfield, Ohio is testing a dial-a-bus service developed by Ford Motor Company. Dallas is trying out electronic devices that control cars seeking to enter expressways, and New York City is expanding its new network of computer-controlled traffic lights. Paris is digging up the Place Vendome and other historic sites for underground parking, and Florence is the latest Italian city to create a pedestrian island, a sizable section of downtown closed to the private car."

The impact of the growing number of cars should be felt most keenly in America's cities. In Los Angeles, autos are multiplying faster than people. The country's present 3.5 million cars will double in the next decade, ¹⁹ and "by the end of this decade, metropolitan traffic volumes are projected to increase roughly 40 percent in Pittsburgh, 50 percent in Boston, and 90 percent in Detroit." Planners predict that traffic will be moving slower and slower in the future despite regional expenditures already totalling \$3 billion for new highways and arterial roads, and \$1.1 billion for a rail rapid-transit system. ²¹

Freeways were once thought to be the answer, but downtown freeway construction is being blocked in city after city. Some now regard freeways as an enticement to people to drive downtown where ample parking, in many cases, does not exist. "Between 250 and 300 square feet of space is needed for every car that commuters park in the city. Most highway interchanges built to accommodate auto commuters take up at least forty acres of land and sometimes twice as much." Chicago's Street Commissioner James McDonough declares, "The greatest answer to the traffic problem is rapid transit and subways." Other transportation people also believe that coping with today's traffic requires that some demand be shifted from private auto to public transit.

The American Transit Association figures that "one rail track can move 70,000 persons as hour. One exclusive bus lane can carry 40,000 persons an hour. But only 4,500 motorists can travel on one lane of expressway in an hour using the typical passenger load of one and one-half persons per car."²⁴

One of the more popular modes of mass transit being used in cities around the country is the bus. Milwaukee is a leader in this form of transportation. Milwaukee's buslane idea now cuts

a 56-minute ride from the suburbs to downtown to 33 minutes. Two out of five riders who now ride the bus formerly drove their cars into Milwaukee. They park in fringe lots at shopping centers, then board the bus for quick and efficient transportation.

Milwaukee is now planning to build a two-lane highway next to an existing freeway exclusively for buses. The buslanes are expected to be congestion-free, carrying 47,000 riders each weekday by 1990, or 25 percent of the rush-hour travelers who commute along that busy corridor. This would mean a reduction of about 6,000 in the number of cars that might otherwise be drawn into and parked in Milwaukee. Buses have an important advantage over the fixed rail systems. Not only can they go over 50 miles per hour on private lanes, they can pick up and drop off commuters in downtwon sectors of business district. They also permit wide flexibility in routing.

Some believe that a better solution is one which combines the convenience of the auto with the high-capacity rate of the rapid transit. One such system is called dual-mode. It would operate in two modes, either manually driven on conventional highways or under automatic control over special guideways. On the guideway, all driver functions would be performed automatically, with the vehicle picking up its guidance and speed instantaneously from a third rail. The driver could read or relax until his exit. A single guideway 7 or 8 feet wide could carry the same number of cars as 5 lanes of highway, 10,000 vehicles (or 15,000 people) per hour. 27

The dual-mode system is still filled with many unknowns.

General Motors had shied away from developing the dual-mode because

the possible damages in case of accident would be so great that special legislation limiting liability would be needed. "The fail-safe mechanism to assure safety at high speeds bumper to bumper have yet to be developed and proven." 28

Other cities in the United States are using different types of mass transit systems: New subways and urban rail lines are being built or definitely planned for construction in San Francisco, Washington, D.C., Atlanta, Baltimore, Los Angeles, Miami, Minneapolis-St. Paul, Pittsburgh, and Seattle. Extension of existing rail-transit systems are being built or planned in New York, Chicago, Boston, Cleveland, and Philadelphia. Subway construction is being considered in Buffalo, St. Louis, Dallas, Houston, and Detroit. Many cities are developing bus routes -- lanes which are restricted solely to buses and built alongside existing freeways. These lanes connect large parking facilities in the suburbs and downtown areas. Los Angeles is considering a twelve-mile busway eastward from the city core, making use of a rail right-of-way. Washington has exclusive bus lanes under construction on Shirley Highway south of the city. When these are completed, the riding time would be cut in half.29 The city will also "Install a computer to control lights at major intersections throughout the city, and buses will have sensing units that can change the lights to green as they approach an intersection, thus moving mass transit faster."30 Pittsburgh is working on two such busways, using a railroad right-of-way and an old trolley car route. Detroit is acquiring right-of-way for for proposed lanes in an expressway median. 31

The Washington Bureau of the Omaha World Herald suggests the viability of the buslane system. 32 Others have suggested the following alternatives:

- Car pools sponsored by corporations located on stress corridors.³³
- Strategic air travel.³⁴
- 3. Tube trains. 35
- 4. Personal rapid transit. 36
- 5. Automated highways. 37
- 6. Movable sidewalks, downtown segregation of cars, and minibus support service. 38
- 7. People movers -- smaller-than-streetcar vehicles usually programmed to conform to the traffic flow which carry people around small cities, large airports, and the like. The major problem lies in programming the special demands of individual travelers into the general traffic flow, a necessity if people are to be persuaded to abandon their private cars. 39
- 8. Dial-a-ride -- a computerized minibus system, allowing door-to-door service anywhere in town. 40
- 9. Tracked air-cushioned vehicles which ride just above the track on a cushion of compressed air. The vehicle could travel at 150 miles per hour initially, and will probably have a feasible speed of 300 miles per hour. It might be ideal for awkward areas like southern California, where commuting distances range from 50 to 200 miles -- too long for efficient rail service and too short for big airplanes.

Morris Forgash, in his article, "Transportation: Year 2000," forecasts that locomotives will be nuclear-powered, and the cars and tracks will be wider. Cars will be cut out, switched (sideways), and loaded and unloaded automatically by radio-controlled devices. People-pods will be lifted by helicopter from convenient locations in major cities and deposited on special flat cars to ride in streamlined comfort. We will have advanced highways equipped with radio beams so that drivers can put their vehicles on automatic pilot. Trucks will be banned from city streets. Monorails in the air, or a "people pipeline" running underground will relieve the congestion choking out cities.

For the mass transit to develop, however, it must fulfill these criteria: To be effective, a transit system must be used by the public. This requires that transit be made more attractive relative to the auto. This will require considerable effort in various areas, including the provision of better, more extensive transit service at an acceptable fare, combined with other methods designed to increase the utility of transit relative to the auto. It will involve innovative measures which will give transit vehicles priority and even exclusive facilities over which to operate. It will involve the development of park-and-ride lots and other special facilities. More importantly, it will involve some measure of public financial support to offset some of the costs of improved transit. If the citizens of the metropolitan area react to these incentives to use transit, as well as to the need to conserve resources and preserve the urban environment, the transit mode for moving people can again become an important part of the total transportation system and serve a valuable function in providing mobility to the residents of the metropolitan area. If the citizens

of the metropolitan area elect to continue to purchase automobiles at the current rate and to allow the continued decline of the public transit system, then it appears that the need for expansion of the street and highway system is inevitable. A higher transit patronage would still not eliminate the need for an improved basic system of four-lane and some six-lane arterial streets. To be effective, the transit system itself must have a good system of streets and highways over which to operate. Increased use of transit necessarily assumes the ability to move the transit vehicles at greater speeds than in the past, and this requires an improved basic street and highway grid system. 43

TRANSPORTATION AND POLITICS

In his "Urban Transportation of the Future", Robert Ayres suggests that political considerations play an important part in the transit system. He indicates that mass transit is less viable in our economic configuration because it is presently difficult to incorporate into the market system. The auto companies have little incentive to participate but are still involved in some of the research. Further, the future of urban transportation depends upon which political coalition wins. To make the issue understandable, he suggests two "teams": "Now let us look at the characteristics of the urban transportation market: There is an exchange transaction. There is (some) competition. There are buyers and sellers, whom you might call players, because the market is very much like a game in the mathematical sense of the word. I would like to suggest the oversimplified but not totally inappropriate notion that the players in the market may be viewed as belonging to two teams. I will call one team red and the other blue. The red team consists of the automobile industry, the petroleum industry, the

state highway departments, the Federal Highway Administration, the construction industry, the cement industry, and most suburbanites -at least, most suburban politicians. The blue team is hard to identify for certain. The U.S. Department of Housing and Urban Development probably belongs on the blue team, along with the Office of Economic Opportunity. Secretary of Transportation Alan Boyd has been talking like a blue. New York Mayor John Lindsay is also a blue as is Ralph Nader. Poor people are definitely blue. Members of the red team believe generally that low density development of the suburban type is a good thing. They do not like crowds (at least on foot). They believe everybody should have wheels, and mass transit should be left to buses, nothing else. A city's major needs, the red team holds, are more freeways and better parking facilities. High density development should be discouraged and where it exists should be allowed to die on the vine. No tax money should subsidize high density urban centers. High density is bad for people. The blue team maintains that cities exist, and can't be legislated out of existence. Most of our people live in urban areas, and urban areas without downtowns are economic, architectural, and cultural absurdities. Moreover, city living is a well tried and ancient form of human association. People need a variety of communities and they like diversity of surroundings, access to specialized services, and the amenities that only a city can provide. As far as transportation is concerned, the blue team believes that cities need some freeways to be sure, but also alternatives to freeways and automobiles -- alternatives like minibuses, automated electric taxis, 'demand-activated' computer-scheduled jitneys, moving sidewalks, and so on. The blue team argues, moveover, that in the past cities have paid taxes for highways which benefited the suburbs and drained the cities of their high income citizens. Suburbanites have run away from their social responsibilities, and now the city needs help. A forecase of future urban

transportation technology is equivalent to a forecast of the outcome of the game being played between reds and blues. On the basis of the existing relative economic and political power of these two teams everybody in his right mind would clearly pick red as the winner, although he perhaps wouldn't want to predict any absolute victory."

In terms of mass transit, the Public Transportation Assistance Act was passed by Congress in November 1970, but the funds were not large. The Bill in 1973 to divert funds from highway to mass transit systems failed in Congress. From the foregoing, it would appear that, given trendline assumptions, there will be a continuance of auto dominated systems.

TRANSPORTATION AND URBAN FORM

How does transportation translate into man-land relationships? According to Cooley, the city emerges because of transportation. 46

The urban structure is a manifestation of at least two major intersects of transportation. For the Omaha-Council Bluffs area, the intersects were probably the Missouri River and the Transcontinental Railroad. The intersect enhances the city's power in what Cooley called the "power of transfer" -- that is, the power to transfer goods from one dissimilar transportation mode to another. From power of transfer, economic power accrues, for example, in the comparative advantage of industrial location. Razzle, Semple and others have studied the physiographic and topographic aspects of location which cause transportation "breaks" from (e.g. rail to water).

Since Cooley, various methodologies for studying transportation land relationships have been applied, including land use, trip-purpose, regression, Markov chains, and gravity models. 46 Isard

has described location theory and space preference. Huff has suggested that age is the most dominant element in consumer space preference, followed by personality, sex, education, mental synthesizing abilities, occupation, and income. Spatial factors play a significant role in determining individual movement patterns such as space preference of the individual, his location in the overall space economy, and the relative ease with which he may move from place to place within the system.

Important variables in terms of transportation focus on "axial growth." This growth forms around the major modes of transportation. From analysis of historical city patterns, various transportation systems can encourage various urban forms. Early foot and animal power encouraged compaction. Later, mass transit systems continued concentration, but also encouraged sectoral growth along rail corridors. Automobiles travelling Interstate and arterial highways have caused amoeba-like spread. Given the continuous use and dominance of the automobile, further quasi-colloidal dispersion or sprawl is envisioned. 47

TRANSPORTATION PROJECTIONS

Barring major changes such as a permanent energy crisis, it appears quite likely that individual autos (of some form) with their complementary road system will continue as the dominant mode of transportation. Auto travel should prevail because:

- 1. The political coalition can ensure its survival.
- 2. The auto is the safest buffer from crime and racial tension.
- 3. Those most likely to suffer from congestion and pollution near their places of residence generally do not form a strong coalition.

It would appear to these authors that engineers, planners, and others who envision future mass transit systems overlook these supports to private auto use and miss the importance of the political coalition and where it is likely to reside.

Trend-line projections would also include some mass transit, however. The researchers suggest that this might occur in Omaha: (1) a short haul, singular PRT with the express purpose of mass transit, but with the real purpose of consumer retail support. The system would act as a quick safe method to transport shoppers from the Westroads to Crossroads, and downtwon. It would lighten parking problems at University of Nebraska-Omaha; (2) bus expressways to enhance MAT's transit program and redirect some road stress; (3) downtown restriction of auto's in a 4 to 6 block radius with the creation of a major parking area, and a short, attractive movable sidewalk between lot and key commercial areas. The sidewalk, however, may have more promotional and aesthetic qualities than practical use, and, (4) a small fleet of minibuses to move the people within the downtown section. The overwhelming amount of tax dollars will probably be spent on the auto and auto related modes, however, with mass transit servicing support and aesthetic functions. The mass transit may be triggered by the city's concern to duplicate, in a small way, what is occurring on a slightly larger level in the megapolitan belt.

SUPER-INDUSTRIALISM -- NON-TREND LINE ASSUMPTIONS

A MASS TRANSIT SOCIETY

If the following conditions should occur, one might expect an extensive mass transit system development: (1) a "green revolution" of life style; (2) a viable environmental and urban coalition;

- (3) a move toward post-Keynesian social-market political economy;
- (4) heavy expenditures in research and development for fast, quick, clean and safer systems; (5) reduction of crime; (6) harmony among dissenting groups; and (7) master land planning and community fiscal regulation. Accepting these conditions, it would appear that the high speed urban mass transit system would emerge. Even then, the authors would still predict some individual auto travel. In terms of population distribution, the shape of the city would tend toward concentration, although some horizontal growth would occur along sectoral lines.

AN INTERSTATE SYSTEM

If the highway system is seen as a viable approach to transport people from the city to the suburbs, then more arterials and interstates may be envisioned than even in our trend-line projections. Assuming this, every major city would have an interstate. The auto market would greatly expand; parking, congestion, and pollution (dependent upon the kinds of anti-smog devices developed) would present problems to the inner city and suburban ring, but not necessarily to the same degree. City government and services would continue to fragment and decentralize. The city should have greater spread.

HOUSING

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

INTRODUCTION

In the early 1960's, Peter Seeger popularized a song about "Little boxes," pink ones, yellow ones, made out of ticky-tack. The message of the song was that suburban tract housing was monotonous, bland, and a blight on the landscape. Suburban tract housing became especially popular after World War II, with the financing of new mortgates by the FHA. For many it was the ideal escape from the city. Though outwardly attractive to the consumer, tract housing of Levitt variety was not favored by planners because of its lack of amenity and originality. Moreover, housing was responsible for large amounts of land consumption.

In the inner city public housing has fallen into disfavor among planners and the public alike. High-rise developments have proven costly to builders and unsafe to tenants, Pruitt-Igce in St. Louis being the most notorious example. "Tenant rights" organizations have triggered rent strikes to enforce demands for better housing but improvements have been slow in coming.

Where land developers and realtors initiate new expansion, it is generally outward, on the urban fringe. Our land development system appears to operate on a "trickle down theory." The typical middle income urban neighborhood begins with two-generation families, as opposed to singles or aged couples. Over a period of time, the neighborhood slowly deteriorates and the single-owner home is sold to the next lower-income group, and in time to yet another lower-income group. In the meantime, the demographic profile begins to

change by ethnicity, income, age, and family life style. Single dwellings become multiple ones and renters out-number owners. Because the regressive nature of property taxes work against home improvements, landlords find that more revenue can be generated by dividing single-family dwellings into multi-family units. In the end, buildings are condemned and revert back to the city, contributing only to land disuse and tax burden.

On the other hand, suburban growth is uninterrupted unless there is a physical barrier. Suburbanites derive many benefits from their location, and in fact, the city should be looked upon as a support system for the suburb. Generally, the tax base is lower since suburbanites can use the advantages of the city while preserving intact the character of thier own neighborhoods. Over and above that, the local suburban governments can be more directly responsive to their needs and can provide better services such as street repair and snow removal.

Suburban tract, urban dynamics and the automobile all give rise to scatteration. It would appear that individual reform programs only delay this process.

HOUSING -- AN OVERVIEW

Where are we today in terms of housing? The U. S. Department of Commerce reports:

- 1. For the first time in U. S. history, there were more housing units in the suburbs than in the central cities of our metropolitan areas or in the non-metropolitan areas.
- 2. Home ownership grew proportionately more among blacks than among whites between 1960 and 1970.

- 3. There was a great increase in the number of mobile homes and trailers during the 1960's.
- 4. The number of apartments increased proportionately more than single-family homes during 1960 and 1970.
 - 5. The value of our homes went up greatly from 1960 to 1970.
- 6. There was a similarly large increase in the amount paid for renting homes.
 - 7. Homes in 1970 were less crowded than in 1960 and earlier.
 - 8. More homes had basic plumbing in 1970 than ever before.2

It would appear for Americans that there are now more renters than home owners, but both have increases because of an undoubling of households. The shrinkage of extended families and upsurge of neo-local ones, may also account for statistics which show that housing is less crowded. Brown thinks we will see more single neo-local family dwellings. 3

The land development system has other implications for Omaha.

Nearly half the homes have been built since 1950. Housing in the study area's counties has grown significantly and, not surprisingly, land values continue to increase. In 1970, the MAPA housing studies noted that the three-county area of Washington, Douglas and Sarpy Counties had 10 percent substandard housing; this is higher than the national average, and most of it is located in the urban core. In January 1973, the Omaha World Herald detected no significant changes in core housing since the first area of 1966. If the existing land development system continues, planning will not be very effective. Terry Forseberg, media and city hall reporter, notes that Omaha has had 10 new in the last 15 years.

FUTURE HOUSING

What will housing be like in the future if there are no dramatic social and economic changes? Possibly the most novel aspect of housing will be in the interior. Northwestern Bell projects picture phones for the Minneapolis area by 1976-78. Video screens, flexible walls, functional furniture, increased use of plastics, and frequent changes in living styles matching life-cycle changes are likely to occur. Neither the exterior nor the type of construction will be dramatically different, however, due to effective opposition by the building trades and local developers. Clark expects that by the end of the 1980's, modular housing will sweep custom building, except for the luxury market. He also sees the cost of housing encouraging smaller homes and less yard space. Moore gives this analysis:

"New housing and urban redevelopment will create such a large market for the home construction industry that it will finally have to innovate and make changes to keep up."

Fowler of the New York Times also sees demand for new construction as requiring mass production. The Omaha World Herald credits past Mayor Eugene Leahy for promoting some compromises on modular systems. On the other hand, U.S. News and World Report takes note of recent court battles that have favored custom builders.

Modular systems appear to be the key to solving American housing problems according to an ABC documentary, "The Building Innovators." If modular systems do not succeed, there would be major increases in suburban apartments, condominiums, and mobile homes. In some respects, the mobile home of the future may be the prefab and the

tract house of the World War II era. From our perspective, degree of spread is dependent upon modularism. If modularism succeeds, we will see higher land consumption than if it does not. On the other hand, unplanned mobile homes and apartment dwellings may take a lot less land, but they may also provide less space devoted to green areas. 18

Over and above the modular issue, there is speculation that the construction industry will centralize and that the majority of new housing starts will occur in the southern half of the Nation. 19

HOUSING AND URBAN FORM

In general, single-family dwellings and their outdoor spaces are large consumers of land. Every major new design tries to incorporate privacy and territorality into living space while at the same time economizing on land consumption. In terms of the environment, housing consumes 35 percent of the Nation's energy production. ²⁰

Data on consumer preference and land use indicate that income is still the major variable. Besides income, stage in life cycle, life style preference, and attitudes toward journey to work are also important. Shifts of residence appear dependent upon price, type of house, type of neighbors, community institutions, and location with respect to a job. Single-family dwelling is correlated with spread. Depending upon the types of land control, multi-family dwellings and condomimiums can consume less land and provide more green spaces. Physical layout of living space can also influence social relations with respect to privacy, security, and identity.

In summary, man-land relationships are dependent upon the type of housing and their physical distance from each other.

SUPER-INDUSTRIALISM -- NON-TREND ASSUMPTIONS

AN ARCOLOGICAL SOCIETY

What if there is a dramatic change in the social-economic spectrum akin to the Green Revolution? What effect would this have on housing? Megapolitan growth would be concentrated in the urban core and in new towns. Growth itself would be controlled through governmental agencies via an overall master plan which incorporates zoning, ordinances, housing codes, and statutes.

Soleri suggests such an "arcology" where man and land are viewed as working in harmony. 23 Large numbers of people would distribute themselves in building systems highly adapted to physical and social space. Greenbelts, woods, bike paths, and manmade lakes would be developed within the urban core, yet distributed in such a way as to be within short walking distances of highrise apartments. Industrial parks would be located away from living areas and blended into the natural landscape. Commuting would be accomplished by mobile sidewalk, electric car, and by personal rapid transit system. Another proposal would take full advantage of R. Buckminster Fuller's geodiesic domes. 24

The present system of political representation based on geography would be replaced by one based on occupation. Government units would expand beyond locality and state to regional dimensions. For the Omaha area, super-community government (with corresponding neighborhood city hall) would encompass perhaps Omaha, Council Bluffs, the surrounding satellite cities, and Lincoln. Regional government would probably be based in Kansas City.

THE RESTORATION TRACT SYSTEM

On the other hand, what if the system should revert to an earlier industrial system? With economic growth based more on the "real" prosperity of laissez faire than on the "forced" prosperity of Keynesianism, there might be a doubling of households. Housing may become slightly larger and more functional to accommodate the larger domestic life. 25

Though public buildings and much private housing would become quite modest in appearance, for those who through hard work, talent, and inheritance could make it to the top in terms of the "American Dream", housing would be palatial. A new "gold coast" would return to the central city. Elegant, hand-crafted custom housing could be produced because of much-reduced labor costs. Generally the spread that would occur would be less than the super-industrial trends, but more than an arcological system.

CONCLUSION

Both housing and transportation are visible elements of urban life and must be included in future projections of urban form. Housing and its spatial distribution are highly related to the existing land development process, one most likely to continue into the future. Transportation is similarly related to the system and will likely continue with the dominance of the private auto.

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CHAPTER FOUR

URBAN FORM

In this chapter the authors will deal with specific problems of how human lifestyle translates into land form. One of the crucial aspects of urban land development is the phenomenon of dispersion. How will the city grow? Geographers have identified certain features that describe urban land systems; not only do they look at core and fringe growth, but also at such social characteristics as population size and composition, household units and housing distribution, economic characteristics, political behavior, and transportation networks. The form of the city is the intermixture of these human aspects and activities in industrial, commercial, residential, and recreational areas.

As MAPA notes in its comprehensive plan, growth takes place in a variety of forms: suburban development, urban redevelopment; new towns; and the like. Growth projections and planning appear to be shaping urban form. From the available secondary sources along with interviews with numerous experts, we will attempt to outline the future man-land formation in the country, the region, the seven-county study area, and in the local area. Our projections will be based upon various dimensions of change dependent upon both trend and non-trend assumptions.

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

National Growth

Assuming the persistence of current trends, population will increasingly cluster in large megapolitan belts along both coasts. According to Jerome Pichard, literally half the population will live in two areas, one along the middle Atlantic coast, and the other along the West Coast. Based on Series "D" projections, eight out of every ten persons will live in 28 metropolitan regions.

Regional Growth

As noted previously, despite urban growth in the Omaha-Council Bluffs vicinity and in the Kansas City area, strip-city formations will not appear in most of the Plains area. The growth of the region should be less than in most other areas of the country; the "megalopolis" will not appear.

Seven County Area

The scope of this study covers the geographic areas of Douglas, Sarpy, Washington, and Cass counties in Nebraska, and Pottawattamie, Mills, and Harrison counties in Iowa. All the counties were founded in the 1850's except for Mills, which was created in 1847.

Questionnaires were sent to every small community in the area, asking about their growth. Information was sparse, but it appears from the comments received and our observation that, given current trends, few if any of the counties will expand into the urban

rim of Omaha. From our observations, and from information received from a private utility report, certain communities will become part of the Omaha area 50 years from now. These communities include Capehart, Papillion, Millard, Bennington, and Irvington. Growth will occur predominately in the counties of Douglas and Sarpy. Repeating the population projections presented in Chapter 2, we project the following growth pattern for the seven counties.

	Year 2020
Douglas	556,495
Sarpy	177,415*
Cass	17,217
Washington	17,595
Harrison	9,902
Mills	8,091
Pottawattamie	88,739

These projections are based on as assumption of 1.8 children per completed family. Our feeling is that the total socio-economic impact on the family, with emphasis on mobility, consumption, and other factors, will continue to reduce family size and that large families are not now considered the positive social good they once were thought to be. Therefore land consumption should be less than that based on ZPG or Series "D" projections.

^{*} Our estimate.

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Omaha-Council Bluffs Area

Given super-industrial trends, what will the city look like? (See Figure I.) In answering this we consulted leading businessmen, land developers, academicians, utilities spokesmen, city planners, and highway officials. Summaries of their comments follow.

Consultant, Academician:

Question: What about social and economic distribution — multiple nuclei, social, or sectoral areas?

Answer: All apply.

Question: Do you buy Garber's study . . . (in terms of neighborhoods)?

Answer: I don't know, Joe Corbin has Council Bluffs information.

Question: Where will the black community expand?

Answer: Where they can - north and west.

Question: Southern and eastern Europeans — where will they expand to?

Answer: Assimilation, but Jewish community is different, but that area is breaking up. Many to apartments in West Omaha.

^{*} Since new land acquisition or redevelopment involves sensitive politial considerations, anonymity was guaranteed to our respondents.

Question: Any "strip city" formation in the Omaha area?

Answer: Compact, smaller-median-sized city. Power-structure in the 1960's caused movement toward Lincoln.

Question: What about more urban sprawl or urban development?

Answer: If Riverfront comes about it will create more residential.

Question: If you had to put your money on it?

Answer: For the next 10 years at least, scattered development, especially to the north. But it would be upper class. Blacks are leary along with East Omaha whites.

Question: Will there be increased vertical growth, enough to preclude sprawl?

Answer: May slow sprawl but developers have too much invested in land in West Omaha. Omaha National Bank plus North-western Bell factions have a lot invested in the Riverfront.

Question: What about double-Dodge corridor?

Answer: No double-Dodge or PRT. Sees citizen group participation in the future. People see how others will make money on Riverfront.

Question: How do you see growth to 2020?

Answer: Active people in Blair and Pottawattamie County as a "sleeping giant". Southern Council Bluffs area industrial. Also along Interstate near and around Underwood, Iowa.

Question: What about north-south growth?

Answer: I see more Northside growth than westward, but no highway development on the Nebraska side; but I do see development on the Iowa side along Interstate 29, down to Cass County.

Question: Do you see any reverse growth from the exurban ring inward?

Answer: More in Sarpy County, Gretna especially, but not Elkhorn.

Question: What about Blair/Missouri Valley?

Answer: Yes, also Mills, maybe its a population threshold thing. Also if urban renewal in Council Bluffs is successful there will be development there, but everything in Iowa is Des Moines-oriented; i.e., government.

Question: Why can't Council Bluffs attract industry?

Answer: Stigma.

Question: Can this be overcome?

Answer: Maybe to people in southwest Iowa but not Omaha people, and that is where the money must come.

Question: In migration, how do you see this? Will people see a mystique about the Plains?

Answer: The great American perception is a cultural and physical desert . . . there is no mystique. Population growth nationally is slowing. Omaha will not grow faster. No megalopolis. I can see development along eastern side of the Missouri River.

Question: How about population?

Answer: Northern (Bell) people have looked at age-specific migration - 1960 to 1970, but averaged down to zero in the year 2020. Jetton (Thomas Jetton, Director, Economic Research) will tell you he's not sure. We have tended, for political reasons, to make rural counties higher than Jetton's and urban counties less. Urban areas will be larger, rural areas smaller, with growth in the outer urban ring.

Question: What about mass transit?

Answer: Down corridors, but will still need autos.

Question: Downtown area . . . what?

Answer: No growth, but the gasoline crisis will freeze urban sprawl. An interesting factor here is this: Developers have purchased cheap land out west — with cheap land one should

be able to build cheap housing. Downtown land is expensive so this indicated that higher-priced housing should be built there. But the reverse is true. This says something about the market system. There has been a boom in condominiums — because everyone else was doing it. Both types of development. This will take away from scatteration.

Question: Do you see less scatteration . . . if you were doing a trend line, how would it look?

Answer: Amoeba — egg-shaped. Crucial need for north-south access. Faster north-south expansion than western.

Question: What about Riverfront?

Answer: Incidental. I see it as recreational . . . not a variable. The road will not move masses of people.

Question: One last question . . . describe Omaha 50 years from now . . . more vertical growth than horizontal?

Answer: Horizontal.

Question: Would a rightest or liberal tendency in the country change this growth?

Answer: No . . . trend line.

Utility Spokesman:

Development will occur along Interstate toward Lincoln. This individual wants a big lake between Omaha and Lincoln with rapid transit connected. Around 2000 this trend will be recognized.

Omaha growth? Along transportation corridors. Most pressures would indicate westward.

Council Bluffs? A working man's town. The downtown redevelopment (urban renewal) will suck off the "cream" from downtown
Omaha's market . . . will further contribute to the deterioration
of downtown Omaha.

Expansion with Council Bluffs? General upgrading. Any expansion would be northward . . . (mentioned Underwood, Iowa).

Businessman:

The movement will occur along Interstate 80. Three out of five families move each year. He sees the trend continuing. In areas within Omaha — people will be moving into north and northwest. What about Riverfront? It is a big "if".

Utility Spokesman:

He uses MAPA material for where growth will occur. We asked him about spread vs. high-rise . . . he said, spread. Noted fantastic growth south and southwest. Riverfront . . . it may slow down some of the business development out west (Old Mill area, etc.) but will not have effect on residential development as a whole out west.

Utility Spokesman:

This individual sees growth and sprawl rather than redevelopment. Southwest along the Interstate (80). One look at a relief map will tell you why growth does not go north or northwest. It may go a little bit some south. You have natural drainage northwest to southeast. Sewer lines tend to follow natural drainage lines . . . start at the bottom of the watershed and work up. Doesn't see much development (residential) connected with Riverfront.

Therefore, no geo-thermal power sources in this area . . . maybe in Wyoming. Tremendous coal reserves in Wyoming. He sees 7-9 percent growth in power usage in Omaha area (this is less than the 10 percent national projected increase). He sees no heavy industrial growth (thus no demand for enormous amounts of power), but continues to see service/commercial growth. Only major resource that we have here is agricultural.

Planner and Consultant:

There are two different projections for development (metro area) to 1995. Recently some have been revised because, while the total population looks the same, some expect shifting to Sarpy County, thus lowering population projections for Douglas County. Same projection for the SMSA though.

If the Riverfront Program Development goes "its going to completely re-orient the urban growth in the Omaha Metropolitan area". He feels that it would be residential, commercial, and industrial.

He sees urban growth of the city today moving from the central city to the southwest, along the Interstate toward Lincoln. He also notes substantial growth south in Sarpy County right now because of readily developable land and proximity to Interstate 80. Omaha-Fremont Freeway has recently been approved by the Nebraska Highway Commission and will spur growth into the north-west (4-lane full freeway continuing on north from Fremont). This is a very fine area but will get farther and farther from water supply and sewer supply.

Riverfront development could cause development on the Council Bluffs side. Riverfront will happen, but not on the grand scale some envision. It will come about because there is so much impetus behind it already, both in terms of the political community and the financial community, and its pretty hard to guess that it would stop at this point.

The road going up and down the river is a viable part.

Businessman:

In addition to westward expansion there will be some northsouth expansion, but there should be more expansion than redevelopment.

Planner, Transportation Consultant:

There will be an expressway from Lincoln north to South Sioux City and also one roughly on Highway 81 (a possible extension). Planning seems to center in Kansas City, not in Omaha or Lincoln.

In Omaha area, possibility of streets being set aside for high speed bus travel, but not using the Interstate which would cause major revamping.

Question: Do you see any major roads being built out of northwest Omaha?

Answer: Only projected, something near the airport "below" (south of) the Mormon Bridge structure. I am not aware of anything being planned between Mormon Bridge and Blair.

He envisions (15-20 years) radio or guidance control systems (e.g., buried in pavements) so there might be high speed lanes. The auto will be around but perhaps it will get power from road-way. There will not be a decrease in number of cars but change in type.

Utility Spokesman:

The reason that the city has expanded westward is that cornfields are cheaper and easier to build things on than timberlands that are hilly. The fact that real estate developers have bought everything out to the Platte River (or have options on it) may indicate that no matter what happens from now on, it will be easier for bedrooms to expand westward.

Certain difficulties could be overcome to the north; he thinks there would be some growth in that direction. The North Freeway will also be a factor in influencing that. He felt forced to say that although the conventional approach here in the past has been to westward expansion (for purely economic and speculative reasons for the housing industry) the construction of the Kennedy Freeway toward Nebraska City and the completion of the North Freeway as far out as they can get it will make available prompt access to riverfront residential sites which he thinks will develop . . . not as rapidly or in as great a density as out west. There is now overbuilding of apartments in western Omaha. There may be some leveling off in building in the near future.

There is inadequate water supply north. There are no water mains north of 60th and McKinley, and it would cost a great deal to pump water to the Fort Calhoun water plant.

Council Bluffs will probably not experience tremendous growth.

Nor will there be a rapid shift in industry for the two cities.

There might be some on the Bluffs side along Interstate 29 northward.

There may be some lessening of differences between the two cities and easier access to Council Bluffs.

More westward expansion is envisioned. The north only for the upper class. The Riverfront will not be a residential phenomena. The ghetto will continue and there will be a continuance of auto dominance.

If crime and poverty groups are still apparent, Interstate systems will prevail.

Academician:

If the country moves leftward, there would be an income referm, but not until the early 1980's will any liberal direction be noted. Even then there will probably be no radical changes. However, a swing now to corporate socialism with emphasis on military and industry would shift some income to the lower income group.

The Riverfront development is going to encourage people to get around into the rural areas and simple life outside the cities. Even now you see more housing along Highway 133 in Washington County on the rim of Omaha. I see more dispersion of the city population. Gasoline shortage could slow it down a little.

Nationally-Known Urbanologist and Futurist:

Omaha's policy must also consider, besides agriculture, the impact of the military. How will military funds affect the city? Large increases or decreases could affect the southward growth.

Urban growth is an outward phenomenon. The exurban ring is unplanned because it is carried out by the real estate development community. Scatteration will continue in a Keynesian market system. Sprawl will continue and the centers will rot. The financial interest plays an overwhelming part in distribution of population mix.

Keynesianism will also foster continued local decentralization of government, making the cities harder to manage and operate.

There may be a left of center drift in the country because (1) continuing need for federal regulation, like anti-pollution legislation; (2) industry has now become nationwide; industrial location is not always concerned with geography; as industry federates, the government does also; (3) the system may change toward the left because of increased foreign competition, the weakness of the American dollar, the common market, the oil freeze in the mideast, and the multi-nationals pushing out of the United States to cheaper labor pools, causing more government planning in the U.S.A.

However, if forced to bet on an urban growth for the future of the Omaha-Council Bluffs area, he sees a combination of types of growth but with heavier emphasis on sprawl. Omaha has the space and life style, with large corridors to push people farther out. Single dwelling will predominate except for the elderly, who will gravitate to multi-dwelling high-rise.

Given super-industrial trends, it appears that Omaha will disperse horizontally.

From our observations and interviews, the authors see this happening if a system similar to what we have now continues:

Social Implications of Land Use

l. Increasing life cycle segregation which veers away from multi-dwelling and encourages zonal land formations. High propensity of new neo-local commuters in the area of the North Omaha Airport, forming a ring moving southward through Sky Ranch Airport to a line four miles beyond Millard southward to five miles beyond Ralston to one-half mile beyond Capehart. On the whole, residential growth will be more uniform in extension, but with the intrusion of proposed lakes and open space in the south and north, there will be the interruptions (with the South Airport and open space areas). The west should have more scattered growth forming around open-space areas and proposed lakes. The overall growth will be amoeba-like (with more emphasis) in the west and slightly more in the north than south, but each should be more scattered than uniform. In Council Bluffs, residential growth will continue north and northeast along and within the Bluff rim.

^{*} The method and theory used for projection of this model involve trend-line projections, socio-cultural forecasting, and analysis of interviews and secondary source materials.

- 2. There will be a continued nucleation of ethnic groups moving from present sites outward. Selected impaction will continue in the black community, but dispersion will be directed north and morthwest from near Northside⁸ to Miller Park, Florence-Minne Lusa on the north, North Omaha, Fontenelle and Benson on the west. The southern and eastern European community should continue southwest and north European and Jewish community toward the north, northwest, and west. For Council Bluffs, the urban renewal will firm up the nucleation of the black community. There will be a continued north and northwest rim growth of north European community.
- 3. There should be a continued axial-sectoral segregation of social classes, given are continued super-industrial trends. The upper strata are likely to be located farther west between West Maple and West Center but heavily near Dodge Street, with some growth also in the wooded northern areas beyond Dodge Park. Low income groups will be located in South Omaha and the near Southside, near Northside, East Omaha, Fontenelle, and Benson. Middle income will be located on vast suburban belts along major corridors in Southwest and Northwest Omaha. In Council Bluffs, low income residents will continue to be located in downtown areas, the middle income in suburban tracts along north-south region.

Economic Implications

1. Major industrial and commercial growth will continue in the agri-business area and increase in service-quaternary sectors. Service-related industries are more likely to locate in the suburbs; e.g., south-southwest between Ia Vista and Millard and on I-80 along a belt forming on the south side of I-80 from the I-80/I-680 interchange and drifting eastward. Retail commercial projections show

the city toward outward expansion. There will be duplication of service, but suburban residents should benefit from the better services and shopping facilities.

Without a super-community government, small communities in the area will work to resist annexation.

Housing and Transportation

Given trend-line assumptions and land the land development system described in Chapter 3, a continuation of single-family dwellings, with most new housing starts on the rim of the city should happen. Suburban land development will probably dominate over the Riverfront as for residential preference.

MAPA suggests approximately 4,800 new single-family units per year. Though we do not accept the population forecast, MAPA's housing projection appears acceptable. New housing starts should amount to upwards of 240,000 by the year 2020, and these will be heavily concentrated toward the west, northwest, and southwest.

Given the trend-line assumptions of auto dominance and the political coalitions favoring cars, ⁹ there will be continued and increasing use of individualized modes of transportation, though with less reliance of internal combustion vehicles. Roads will take precedence over mass transit.

SUPER-INDUSTRIALISM - NON-TREND ASSUMPTIONS

The Green Revolution

The city's future may look strikingly different if there were dramatic social and economic changes to the left. Numerous sources have described the future city given these changes; others have argued the viability of new towns, 10 greenbelts, 11 and specialty cities. 12 A composite of these views appears in Freeman's passage:

"I see an American landscape dotted with communities, each including a blend of small cities, new towns, and growing villages, with open country in between. Each of these extended town-country communities would have its own jobs and industries, its own college or university, its own medical center, its own cultural, entertainment, and recreational center.

I believe that small towns and farming areas offer enormous potential for humane solution to today's problems. Modern technology has made possible a modern town-country community. The new technology of transportation ties the different parts together. The technology of communication makes administration practical. The technology of modern industry requires space for new plants with continuous flow, straightline production operations. The developing technology of training makes it possible to create skilled workers out of rural people."

Suburbs therefore would diminish or new growth would be planned to sustain urban life. The assumption is that groups of urban dwellers will form a coalition which will achieve more unified economic and environmental planning. Through the strategic regulation of key industries and commercial, transportation, and health services, there would be a reordering of priorities and a reallocation of resources toward humane ends.

CHAPTER FOUR

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CHAPTER FIVE

SUMMARY AND CONCLUSIONS

INTRODUCTION

This chapter briefly summarizes what has been discussed in the past four chapters. For clarity, the summary will be presented in modified outline form.

CHAPTER ONE

Projections and prophecies about the future have always been with us. Unfortunately, prophecy has not always been fruitful. History is filled with some inaccurate projections. Not all have been wrong, however; Herman Cohn was approximately correct about the impact of the internal combustion engine.

Others such as Verne and De Toqueville has generally been valid.

What has emerged today is a field called futurology, or futurism. Nearly 3,000 persons now work in this area.

Many approaches are used in this area; including the Hegelian, "zig-zag", analogous models, cycle forecast. Delphi forecast, trend line, envelope, scenario, and socio-cultural forecasts.

This report is based upon the socio-cultural forecasting approach, with a structure-function premise. We have looked more at the recurring than the unique. We have assumed interdependence, and organicism, i.e., the whole is greater than the sum of its parts.

National Growth

On a nationwide basis there would be a diminution of the megapolitan belt with a directed growth of new towns in less scattered areas. Population would stabilize at around 230-240 million, although "no growth" or "little growth" would cause some problems of readjustment, essentially this is a projection of the "green revolution" model on a national scale.

Regional Growth

The plains region might experience only minor population increases due to planned redistribution. The outlook for major cities would be about the same, but increases occurring selectively within satellite communities might be dramatic. There, population would spurt because of planned rural redevelopment, a combination of large farms, small specialized farms, and some communes. Improved transportation would facilitate movement in the Omaha-Council Bluffs area.

Omaha-Council Bluffs Area

The Omaha-Council Bluffs area would not expand as much horizontally under this model as it would under trend-line assumptions. Urban redevelopment would occur in the downtown area. The Riverfront area would succeed and expand both in the north-downtown area and in Council Bluffs. Restoration and refurbishment of the downtown, Crossroads, Westroads, and Old Mill areas would continue; the Center and Ames Plaza would be revitalized. No ghettos would exist, and in their place green belts, condominiums, and high-rise apartments would appear.

In our discussion with various experts, we find some who seem to anticipate this trend. Their comments do not indicate blanket endorsement of course, but most desire more investment and improvement in the downtown Omaha area and a revitalized Council Bluffs. The following interviews were conducted with local consultants, businessmen, planners, and others.

Academician

Within the next 40-50 years there will be such a demand on agricultural land, due to population and energy increases, that sprawl cannot continue. Therefore high-rise and urban redevelopment will happen. The buildings will be self-contained. You may live where you work. Given future advancements in transportation and communication more rural redevelopment is possible. Omaha would have redevelopment and a reintroduction of mass transportation; e.g., a monorail. Subways are not envisioned. More air travel would be likely.

Businessman

Urban sprawl was the fad of the 1940's-1970's. Cities can no longer afford to continue this. There is a great attraction for rebuilding in the urban core. Cities and states will have to provide taxing incentives to bring private entrepreneurs into this area.

Initial redevelopment will take place between 30th Street and the river, new towns where there are open spaces along the river. Taxes are important. Ghetto area would be developed.

^{*} Due to the controversial nature of land use, all remarks remain anonymous.

(When asked about the impact upon ethnic and social relationships, he responded that he didn't think integration could occur except within economic classes.) Persons in ghetto areas would stay there, but the area would be redeveloped.

Businessman - Council Bluffs

He sees rapid industrial growth, since large segments of land on the Council Bluffs side of the river have been developed and zoned for industrial use. Much of it, because of the Riverfront Project, will be attractive to industry. The tax levy will be going down relative to Omaha. He expects significant industrial growth in Council Bluffs. Where? Along Interstate 80, near the interchange where I-80 and I-29 meet, near the Spring Street bridge where there is good access to all facilities. The Industrial Foundation already owns a lot of highly developed land there. There will be growth also at Highway 192 exit (near Lake Manawa). No industrial growth is expected north along the interstate. He envisions two towns within Council Bluffs, an old town and a new town, one east of the city and a little south (along Highway 92) and the other east of I-80 where it angles north — from Highway 6 and along the highway. Also he sees growth north of Highway 6.

Planner

Question: In what direction will growth occur in Council Bluffs?

Answer: Undoubtedly east and northeast; the process has already begun.

Question: Degree of growth, how far will this go?

Answer: Must consider Riverfront, Council Bluffs has more to gain, and there is more vacant, accessible land on the Council Bluffs side of the river. A large geographic area exists along I-80. There are fine industrial areas along the river.

Planner

Question: Probability of urban spread vs. urban redevelopment?

Answer: (1) Development at a much higher density. Rate of land absorption will be reduced 50-70 percent vis-a-vis the 1960's (along the periphery). (2) Marked increase of development in the urban area (especially in the inner portions). (3) Little pure urban development except the downtown area.

Environmentalist

He notes the MAPA Open Space Plan as a good guidline to development. The map displayed in this report indicates areas that might be preserved for open space. The reasons that these corridors were picked were usually because of limitations for urbanization, like poorly drained soils and high slopes, conditions which would definitely be unfavorable for urbanization. It's a pretty good indication of what will not be urbanized.

How does this translate into land formation? The following appears germaine to this model.

Social Implications of Land Use

- 1. Planned life-cycle segregation, more density and greenery to divide the clusters of people, and peripheral cottages.

 Marked zonal formations for life cycle, except in specific communes. Preponderance of neo-local families, but more urban co-ops and communes. Few neo-local commuters. The extent of the growth rim would be only one, to one-and-one-half miles north (through northwest city line), one mile beyond the western edge, one-half mile beyond Papillion, with no increased growth expected in the Capehart-Bellevue area because of decreases in Military expenditures. Continued horizontal expansion of surrounding satellite cities would occur, and open space and other ecological areas would be developed.
- 2. Under this system, ethnic social distance might be reduced. The black community would be redeveloped with nucleated black separatist areas and other areas containing black middle class, and with white upper-income families located in Riverfront residential areas. The expansion of southern and eastern Europeans to the southwest would be diminished. Nucleation of ethnic segments; e.g., Czechs, and Slovaks, would be prominent, but public areas would be available to all groups. South Omaha would continue redevelopment. New growth in the northwest and southwest would increase by attracting middle-income Europeans and affluent persons with minority heritage.

Upper-income groups would be located in the Riverfront area and in cottages around the Westroads, Old Mill area, and Fairacres. Middle-income earners would be found in geodesic communes and neo-local cottages in the northwest, in Dundee, and in the southwest.

Economic Implication

There would be new expansion in service areas, but predominately associated with the agri-business industry. Industrialism would continue in the Riverfront Development area. Unemployment would remain at a frictional level, about 2 percent. Government would be the employer of last resort.

Population-Environment Implications of Land Use

Open spaces would be cordoned off as public recreation sites, with lakes developed as proposed in the MAPA study. There would be low air pollution levels due to the increased use of electric autos and a well developed park—and—ride system, coupled with stringent water pollution enforcement and control. Population density is projected at 9-15 persons per acre. Energy usage would be about the same as it is now and would be produced from coal and solar energy.

Political Implications of Land Use

An effective urban coalition would create new political alignment. Elections would be geared more to issues than to personalities; both major and minor parties would be ideologically oriented. The Federal government would remain in Washington, with a regional government in Kansas City and a super-community government distinct from state and county governments in the local area. The super-community government would cover Omaha-Council Bluffs, Lincoln, and surrounding satellite cities. When one looks at the future these two major cities should be viewed as one.

Housing and Transportation

A planned development of housing would occur, based upon a comprehensive master plan. There would be a diversity of high-rise structures, condominiums, and geodesic domes. Housing units would be closer together than now, but better shielded for privacy by greenery and woods. Housing starts would be less than projected under other models.

Mass transit would be the prime mover through the popular use of fast, efficient PRT's. The major Dodge Street corridor would be a west freeway for the PRT. Feeder routes would merge into the PRT at 30th, 52nd, 72nd, and 90th. Other freeways would include a north-south access to the Riverfront. The remaining streets would be resurfaced and widened a half-car length on each side for compact electric or steam-driven vehicles.

Restoration City

What if the city should return to an earlier system? It would be extremely difficult for the United States to become predominently agrarian again without modifying some aspects of the previously existing laissez-faire system. Rather than a laissez-faire right, a system of an authority-oriented market system might be appropriate. Though there is a great deal of literature about the political system, it does not translate easily to land forms. We therefore will draw upon earlier urban experience as it might be affected by superindustrial technology.

National Growth

The population of the United States would become considerably larger due to the return to traditional family patterns and sex roles. With the possibility of a population increase numbering additional millions, megapolitan belts would become extremely large, with one encompassing the middle Atlantic, another the Florida area, and others the West Coast and Southwest.

Regional Growth

On our map (see Figure III) we project less sprawl even with increased population, because of expected low income impaction in north central and in South Omaha as well as in Council Bluffs.

Omaha-Council Bluffs Area

The Omaha-Council Bluffs area would not expand as much horizontally, due to unstable market conditions. The observations of these authors on the "restoration city" model lead to the following conclusions.

Social Implications of Land Use

1. Life-cycle segregation would diminish with a doubling of household units. In an unregulated society, credit is harder to obtain because lenders feel greater uncertainty about the future. Therefore, the lower middle and working income people, as well as the poor, are forced to "double up" when money for credit purchases is unavailable. The entire city would take on a lower aesthetic

profile, with apartment-type housing units "produced" from older homes to provide housing for extended families. Urban fringe growth would spread to approximately two miles north of the present city limits, one mile westward and only a little southward with the exception of Capehart (which would expand due to increased defense expenditures).

- 2. Under this system, racial and ethnic differences would reappear in tradition, law, and custom. By custom or law, minorities would remain in place. High-rise structures would shelter high-population densities in those areas. The South Omaha area would be quite densely populated because of the doubling process. Spread by minorities would be lessened via economic restraints and the out migration of others to the suturbs would slacken. This would lead to diminished rim-growth in the northwest and southwest. Nucleation would be pronounced and rigidified.
- 3. Housing for the economically privileged would be concentrated in a protected "gold coast" section of the central city or in suburban developments especially around the Regency and Fairacres areas. New villas might be established in wooded areas north along the river. Tension-ridden sections of town would have more public protection programs. Sectoral growth would be pronounced along the corridors.

Economic Implications

Most industrial facilities would be established in the lowerincome areas. Suburban industrial growth would not be as popular as in other models because out migration to the suburbs has diminished. Unemployment would fluctuate between 2-3 percent during overseas conflicts to near 25 percent in peacetime economic downturns.

Population-Environment Implications of Land Use

The inner-metropolitan area might be extremely polluted as a result of concentrated industrial areas. Environment would be less important than economic growth, though falling consumer buying would somewhat offset environmental damage. Population density would reach as high as 10-15 people per acre within the city limits.

Political Implications

Both major political parties would espouse similar ideologies, with more of a populist tinge. Political activity would occur among the talented. Minorities, women, youth, and propertiless men would not participate. In national politics, the President might be chosen by the Senate. States and governments would take precedence over municipal governments. The state legislature would be dominated by a rural-suburban coalition.

Housing and Transportation

Housing would be extremely varied. In low-income sections large old homes would be divided into quarters to house extended families. Despite increased population, new housing would falter. Most transportation would be by auto, with buses serving the economically depressed.

CONCLUSION

By way of summary, we have condensed the preceding discussion into a chart of the factors and forces conducive to varying degrees of population dispersion (Table of Dispersion). An ideological bias is implied in each model presented, as well as an analytical stance on past experience, current reality, and future possibility. Our final conclusions are contained in the next chapter.

TABLE OF POPULATION DISPERSION

VARIABLE Social Implications	HIGH DISPERSION	MEDIUM DISPERSION	LOW DISPERSION
	Super-Industrialism	Super-Industrialism	Super-Industrialism
	Keynesianism	Laissez-Faire	Social Market
Primary Institutions	Neo-Local Family		Extended Families
			Communes
Secondary Institutions	Vodernist Religion	Fundamentalist Religion	Eclectic (composite)
	Adhocracy	Bureaucracy - Amall Owner	Government
Race	De facto Segregation	De jure Segregation	Integration or Cultural Pluralism
Class	Class Division on Unplanned Land	Defacto Residential Segregation	Class Harmony on Planned Land
Economic Implications			
	Survice (private)	Agricultural-Industrial	Sarvice (public)
Employment	Moderately Low	Wide Variations	No
	Unemployment	in employment	Onemployment
Population - Environment			
	Figh Population		Low Population
Distribution	Suburban Distribution		Urban-Rural Listribution

VARIABLE

VARIABLE (cont'd)	HIGH DISPERSION	MEDIUM DISPERSION	LOW DISPERSION
Political Implications			
Government	Centrist Government	Conservative-	Liberal .
Coveroment Unit	Federal - State	Authoritarian Gov.	Federal - Super-
		•	Community -
			Neighborhood
Housing Implications			
Fousing System	Land Developer System		Flanned Housing
Louse Type	Single Dwelling		l'igh-Rise
Transportation Implications			
•	Single Auto		Mass Transit

Chapter 1 of this report concluded with introductions to succeeding the chapters and with a note about the Hoover Commission. Some 50 years ago, this Commission successfully predicted the life styles of today. We hope to emulate their success in regard to land use over the next 50 years.

SOCIAL ECOLOGY

SUPER-INDUSTRIALISM TREND-LINE ASSUMPTIONS

EARLY HISTORY

The city traces back to 3500 B.C. Today America is emerging into an urban super-industrial state.

CHARACTERISTICS OF SUPER-INDUSTRIALISM

Super-industrialism involves a life style of mobility, increased consumption, transience, and instant communication. The economy increases its service and knowledge functions.

Speciality subcultures emerge in this system because of large-scale production. The culture is also increasingly sensate, bourgeois, centralized, and westernized. It is also suburbanized.

POST-INDUSTRIALISM AND TECHNOLOGY

From various Delphi forecasts, there are numerous new technologies in the making. Some projections include ocean farming, simple robots, weather modification, genetic control, cosmetic surgery, sex change, and non-harmful drugs.

"PRIMARY INSTITUTIONS OF THE FUTURE"

Families will remain essentially neo-local, but there will be significant increases in communes and cooperatives. The number of children per family will decline. Women's position should improve. Other sexual alternatives will be less of an issue. The traditional family will be a significant minority force.

The church should appear to polarize between fundamentalis and ecletics. Groups emphasizing primary interpersonal relations will emerge.

Voluntary associations will also move toward more expressive values and personal relationships. Affinity groups will be most popular.

Bureaucracies will evolve into ad-hocracies. These are large, formal associations brought together for short periods and for specific purposes, and then dispersed. Democratization and increased job mobility are predicted.

"INTERACTIONS AND LIFE STYLES"

There will be more social equality, poverty will be minimized. Average annual income in 1971 dollars should rise to between \$18,200 -\$20,000 by 2020. There will still be racial separation. Ethnic subcommunities may be increasingly assimulated, but will not give up their identities.

Communications will be faster and more efficient. There will be increases in alienation, a la "future shock." Psychiatry, religion, and pharmocology will be looked upon for help.

"SOCIAL IMPLICATIONS OF LAND USE"

This life style translates into land form by various processes. Family systems will spread in a zonal formation about the core of the city. Singles, aged, and large poor families will live in the core, and small, neo-local families will live on the rim.

The super-industrial system also weakens the "centripetal pull" of downtown, encouraging megapolitan and exurban growth. No strip-city formations are projected for the local area. Zonal patterns are predicted for families and sectoral formations for social classes. Like slices in a pie, classes are divided along corridors, lower income toward the core, upper income toward the rim, and portions of the city and middle income toward the rim.

Ethnic groups are likely to form in small nuclei throughout the city. The nucleation between whites and those of minority heritage is mutually exclusive and nearly complete.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

"THE GREEN REVOLUTION"

What happens if there is a dramatic shift in political, social, and economic life?

The private-corporate system changes. There is generally a service economy but consumption is reduced. There is increased leisure, lower population, post-Keynesian government, racial harmony, considerable lessening of stratification differences, increased communal life styles, lowered expenditures, and a new urbanized existence.

"POLITICAL RESTORATION"

If change is too rapid, it may alienate enough of the population to force a return to an earlier life style. Given the crisis nature of the change, authority oriented solutions may replace traditional controls, income variances may widen, and tension situations may occur. On the other hand, for those who can utilize their economic liberties, the majority of the talented of proper heritage would be able to ascend the socioeconomic ladder. In terms of land, the system would encourage pronounced nucleated patterns of minority groups. Zonal family patterns would be reduced as families double up, reverting back to traditional "stem" or extended family forms. Sectoral class formations would become more visible. Spread would not be as pronounced in these areas because out migration to the suburbs would diminish with higher residential separation.

LAND ECONOMICS

SUPER-INDUSTRIAL ECONOMY -- TREND-LINE ASSUMPTIONS

The present Keynesian market system will continue but the service, and quaternary sectors will increase in relative importance. The labor force will be better educated and equipped to perform in the market place.

Consumer buying will increase. Obsolescence and impermanence should enhance rentalism. The unemployment rate will run as low as 2 percent, but generally will range between 4.5 to 6 percent. There may be a 30 to 35-hour work week. The economy will increasingly centralize.

Land economics deals with how trade and finance affect land form and use. Trade and location theories would assign Omaha to a position of economic primacy over southwest Iowa and northeast Nebraska. Omaha's growth has been predicated upon the interchange of transportation modes, chiefly trail and nature.

Given trend assumptions, Omaha's economic base will remain mixed agri-business and service. There should be a "competitive shift" westward and south-westward in Omaha.

Retail outlets will need more land.

Omaha should in the future attract more industry because of its geographic location and conservative political base.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

"A PLANNED CITY"

What will happen if there is a shift to political left (e.g. a social market economy)? Productivity would be lowered. Income redistribution would occur. The upper classes would take on a lowered profile. Master planning would occur in the economics of land formation.

The system would be less growth oriented. Private enterprise would play a useful part in certain industries, especially in the service sector.

"THE RESTORATION CITY"

For those who command the economic advantage, the urban rim would provide elegant housing. The church and fraternal orders would take on increased importance. The family would take on renewed value as a refuge from economic competition. People would not have to face the forced prosperity that may cause material decadence.

Big government would not interfere with the natural role the commercial sector would play in governing the system. Effective participants in government would be those who wield economic power.

Unemployment would run from 2 to 3 percent during wartime to 25 to 30 percent during a full depression. Ethnic and racial segregation would increase. Urban sprawl would recede.

PROXEMICS

SUPER-INDUSTRIALISM -- TREND LINE ASSUMPTIONS

"POPULATION AND HUMAN BIOLOGY"

Proxemics is used here to describe man-environment relationships, as well as the special problems of human dispersion and crowding.

"POPULATION GROWTH"

Population growth is a very controversial issue, with one side arguing that the United States is prosperous, can support many people, and that our rates of increase are going down. The other side suggests that population growth is a problem as real numbers increase yearly.

Given current trends, the U. S. may incur zero or negative population growth by 2020. We may have 270,000,000 people or much less, given the current downward rates. Despite that decline, pressures on natural resources may rise. As a prosperous country, the Nation's energy use has increased 10 percent every year. Solid wastes have doubled since the 1920's. Population has increasingly concentrated in coastal areas.

"SOCIAL ECONOMIC IMPACT OF POPULATION"

Slower growth need not depress industry, because increased consumption would occur. Public service expenditures would be reduced, and a 2-child family would be the norm.

"REGIONAL GROWTH"

The Plains would grow relatively less than most other portions of the country. Nebraska would only slightly increase; the Dakotas would continue to decline.

"SEVEN COUNTY AND LOCAL GROWTH"

Growth would occur mainly in Douglas, Sarpy, and Pottawattamie Counties.

"RESOURCES AND ENVIRONMENT"

The energy shortage is also fraught with controversy, but given trend-line assumptions, nuclear power will be increasingly used in the future.

"FOOD SUPPLY"

In world politics, food supply will play an important part. In the United States, hunger may persist in depressed areas. The seven-county area appears to escape this difficulty.

"HUMAN BIOLOGY AND URBAN FORM"

In terms of population distribution, the city will continue to scatterate, with the exception of low income, minority persons. Quasi-colloidal dispersion may best describe the rim population distribution.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

"ZPG SOCIETY"

A "ZPG" Society would be more affluent, older, and probably somewhat more conservative. Job mobility and economic growth would be diminished to some degree.

With reduced population, it is probable that the country could devote its energy toward solving other social problems. The Commission on Population and the American Future could not ascertain

one social ill that would be improved with increased population.

"RIGHT TO LIFE SOCIETY"

Though pro-matalists are now not opposed to birth control, it is still possible that a large population increase may occur.

If so, land development and family goods industries would be exceedingly well. A highly populated society would seek less crowded conditions in the Nebraska area. Omaha's tax base, as well as its tax load, would then increase.

GEO-POLITICS

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

"POLITICAL CULTURE"

Due to isolation from other western countries, the United States did not become imbued with alien philosophies.

Not all agree with the definition of the American political system. Both political left and right decry domination by certain sectors of the population. Each, however, have differing remedies for the condition. Moderates uphold a countervailing system where real choices are possible and coalitions can check the powers of other powerful groups.

No great changes are projected for the United States' political system. A center-right coalition will probably continue to exist. The Federal system will remain Presidential, with Congress generally gaining some power and accepting a more supportive role.

World politics will be continually stressful. Under superindustrial trends, the public protection sector will remain large.

LOCAL AND REGIONAL GOVERNMENT

"GOVERNMENT FORM"

Suburban-oriented government will continue to remain important. City hall will have to endure financial deficits and other difficulties.

"CRIME"

Crime may remain high. Reduction in crime will not occur likely through social rehabilitation, but through sophisticated police technology.

"MEDICAL CARE"

A national health policy may come about, but comprehensive medical care is not envisioned.

"EDUCATION"

The institution of education may be detached from the property tax and more centrally administered. Open system concepts, more vocational orientation, and voucher systems are envisioned. "THE URBAN CRISIS VS. THE LOGIC OF METROPOLITAN GROWTH"

According to the "urban crisis" position, cities will have more trouble but will form urban coalitions to overcome their problems.

The "logic of metropolitan growth" position indicates that the city as a private enterprise system will remain unheavenly in spite of attempts at reform. Based on current projections, Harvey S. Perloff indicates, "we could build great cities, but I don't think we have the will to do it."

CHAPTER THREE

TRANSPORTATION

Chapter 3 deals with the highly visible aspects of transportation and housing.

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

"HISTORY OF TRANSPORTATION"

Cities grew because of the intersection of major transportation routes and the interchange of transportation modes.

Mass transit lost its predominance after World War II. The Omaha-Council Bluffs transit system has suffered diminished ridership since the 1950's. The individual auto predominates today.

"THE AUTOMOBILE"

It appears that the car will prevail as the primary mode for personal transportation within the city. Local authorities appear to be more enchanted with autos and roads than with mass transit.

"MASS TRANSIT FORMS"

Mass transit types include variations of buses, minibuses, PRT's, subways, and dual modes for automatic control of cars on the highway. To be effective, mass transits must provide most of the conveniences offered by the automobile.

"TRANSPORTATION AND POLITICS"

In terms of political coalition, the interest attached to the auto appears to be strong and enduring. An auto-dominated system is projected.

"TRANSPORTATION AND URBAN FORM"

Because of the auto, urban form today is amorphous. Mass transit encourages some sectoral growth.

"TRANSPORTATION PROJECTION"

Given trend assumptions, Omaha-Council Bluffs will have more expressways, with buses as a support to the auto.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

"A MASS TRANSIT SOCIETY"

If a green revolution occurs, a mass transit system is envisioned with small electric or steam-powered autos as support. The shape of the city will be more compact.

"AN INTERSTATE SYSTEM"

This system would enhance even more suburban growth. The city would have greater spread. A few buses would be maintained for the lower income groups.

HOUSING

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

"INTRODUCTION"

Planners and others have been critical of spread, but suburban development continues to flourish.

Public housing is fraught with controversy and is generally not considered successful.

Given trend-line assumptions, the current land-development system will continue. The shape of the city will be determined by private sources. In the present system a "trickle down" occurs by which housing passes from one income group to the next lower one, theoretically ending up as vacant land held by the city.

"FUTURE HOUSING"

Single dwellings will generally prevail, augmented by mobile homes and some high-rises. The big changes in housing will be interiors having flexible walls, functional furniture, and labor-saving devices.

"HOUSING AND URBAN FORM"

Single dwellings cause more land consumption and life-cycle segregation than do multi-family units.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

"AN ARCOLOGICAL SOCIETY"

Soleri suggests a system where man and land work in harmony.

The basis of the system is a megastructure occupying only 1 percent of the surrounding land.

"THE RESTORATION TRACT SYSTEM"

This involves the return to an older settlement pattern based on family-centered activity. Public buildings and much private housing would decline in quality, but due to the availability of cheaper labor, elegant housing would be afforded the affluent few.

Probability appears to be on the side of the single dwelling and the individual auto.

CHAPTER FOUR

URBAN FORM

How does human life style translate into land formations? Generally, growth can occur horizontally through suburbs and new towns, or vertically through urban redevelopment.

SUPER-INDUSTRIALISM -- TREND-LINE ASSUMPTIONS

"NATIONAL GROWTH FORMATION"

The Nation will undergo megapolitan development with population concentrated in middle Atlantic, Florida coast, and the west coast areas.

"REGIONAL GROWTH"

The Southwest will likely get a large percent of the growth, and the Plains should grow the least. No strip-city formations are envisioned in this region.

"SEVEN COUNTY AREA"

We will find the biggest percentage of growth in Douglas and Sarpy Counties where, by 2020, Douglas County will have around 562,295 residents, and Sarpy County 177,415.

"SOCIAL IMPLICATIONS"

Given super-industrial trends, what will the city look like?

A number of planners, businessmen, academicians, and utility people

foresaw spread toward the west, northwest, and southwest. In terms of social implications, black expansion toward Benson is expected as the southern and eastern European communities move toward the southwest, and white anglo communities settle in the northwest and west. In Council Bluffs, new rim growth will be slightly to the south, and northwest toward Underwood.

"ECONOMIC IMPLICATIONS"

A private utility estimate of 8,700 acres for commercial and 75,000 acres for industrial development may have to be adjusted slightly downward.

"POPULATION ENVIRONMENT IMPLICATIONS"

The estimate of 3.8 people per acre appears more reasonable than the 7.1 city planners expect or the 5.2 mentioned in a private utility report.

"POLITICAL IMPLICATION"

We envision a continuation of the conservative suburban political coalition.

"HOUSING AND TRANSPORTATION"

MAPA's rationale for projecting new housing starts appears sound. A cumulative total of 240,000 for the next 50 years in Douglas County is expected.

We do not envision a PRT, but rather a double-tiered west freeway over Dodge modifying MAPA COATS plan BBB. There may be a parkand-ride system and express bus lanes near Dodge Street. A small movable sidewalk may be placed in the downtown area for promotional rather than practical reasons.

SUPER-INDUSTRIALISM -- NON-TREND-LINE ASSUMPTIONS

"GREEN REVOLUTION"

If there is a move to the left, major urban redevelopment along the Riverfront lines may be realized.

"NATIONAL GROWTH"

Megapolitan growth may be lessened by the redistribution of people into new towns.

"REGIONAL GROWTH FORMATION"

The Plains may experience only mild increases in population growth.

No matter how the redistribution of population occurs, the Plains
region does not appear attractive to people living outside it.

"OMAHA-COUNCIL BLUFFS AREA"

Under this assumption, horizontal expansion would not be as prominent as urban redevelopment. The Riverfront Project would reorient and revitalize Council Bluffs.

"SOCIAL IMPLICATIONS"

There will be few new commuters on the urban rim. Smaller satellite cities will increase. More growth is to be expected in Council Bluffs and less growth in the Capehart area, due to military cutbacks. We will also experience diminished nucleation among racial and ethnic groups and across class lines.

"ECONOMIC IMPLICATIONS"

There will be 2 percent frictional unemployment. Many industries would be located in the Riverfront Project area.

"POPULATION ENVIRONMENT IMPLICATIONS"

There would be a 9 to 15 people per acre density but less awareness of crowding through improved urban design.

"POLITICAL IMPLICATIONS"

Ideological parties and coalitions would emerge. A supercommunity government encompassing Council Bluffs, Omaha, and the Lincoln area would engage in regionwide comprehensive planning.

"HOUSING AND TRANSPORTATION"

High-rises, geodesic domes, and cottages would be in evidence.

Transportation would be based more on mass transit, with autos powered by electricity and steam.

"RESTORATION CITY"

If there is a return to an earlier system, more growth but slightly less spread than under super-industrial trend-line assumptions would occur.

"NATIONAL GROWTH"

Megapolitan spread will be more compact.

"REGIONAL GROWTH"

No dramatic changes are anticipated in the Plains region.

"OMAHA-COUNCIL BLUFFS AREA"

There would be slightly less spread because of reduced flight to the suburbs. Blacks would be impacted in the near North and South side.

"SOCIAL IMPLICATIONS"

Greater segregation by race, ethnic groups, and class, but less by age and generation, would be envisioned.

"ECONOMIC IMPLICATIONS"

Wide fluctuation in unemployment from wartime (2 to 3 percent) to full depression (25 to 30 percent) causing doubling up of households.

"POPULATION ENVIRONMENT IMPLICATIONS"

More people per acre and more pollution should occur.

"POLITICAL IMPLICATIONS"

State and County governments would take precedence over city government. Ideological party differences would diminish.

"HOUSING AND TRANSPORTATION"

Older, single-family dwellings would predominate; buses would be used more during times of economic downturn.

CONCLUSION

There are tremendous forces working within the present system to encourage the suburbanization of the United States, the Plains region, and the seven-county study area. Technological breakthroughs in transportation and communication, and ideological shifts in political and economic values may restrain this tendency towards spread, but the most probable future will proceed in that direction. How planners - whose professional values would seemingly oppose this trend - should evaluate their role and response poses a dilemma for themselves and their publics. Its resolution, in Omaha, the region, and the Nation remains in the future.